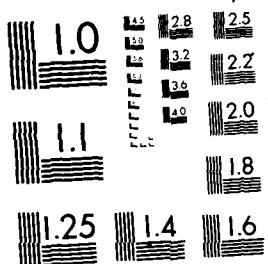


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FOREWORD

The U.S. Navy has a long and colorful history of polar exploration and currently is an active participant in the growing national activity in the Arctic and Antarctic. The strategic importance and increased demand for the natural resources of these areas have resulted in a greater requirement for environmental information. In 1976, the National Oceanic and Atmospheric Administration (NOAA) joined the Navy in forming a Joint Ice Center (JIC) to combine efforts and resources in sea ice analysis and forecasting.

Through 1972, reliable sea ice information in the polar regions was based on relatively few shore station and ship reports ограничен by limited aerial reconnaissance data. These data were further restricted mainly to the relatively small areas observed primarily during the ship operating seasons. The advent of high resolution satellite imagery combined with the ground truth of conventional observations has in recent years enabled a description of the polar ice fields on a semi-synoptic scale in both polar regions.

This publication is the twelfth in a continuing yearly series of Arctic sea ice atlases prepared in the Joint Ice Center at the Naval Polar Oceanography Center, Suitland. The atlas contains weekly charts depicting Northern Hemisphere and Great Lakes ice conditions and extents. The information presented was prepared under operational time constraints principally from satellite imagery supplemented by conventional observations. The Great Lakes ice analyses are derived from satellite imagery and information provided by the National Weather Service Forecast Office, Ann Arbor, Michigan. Table 1 located on the inside back cover summarizes satellite data availability for 1985.

The purpose of this atlas is to provide operators and researchers with panoramic weekly hemispheric sea ice analyses. Satellite data limitations and other difficulties involved in manually synthesizing various forms of ice data have evolved the following analysis procedures:

- a. Conventional shore station, ship and aerial ice reconnaissance observations are plotted on base charts and evaluated for timeliness.
- b. Satellite data is analyzed for ice information content, with the most recent and highest resolution considered first. Synthesis of conventional with satellite data yields the final analysis.
- c. Where sufficient data are not available to define the sea ice limit, an estimated boundary is depicted. After one week of no data availability the ice edge position is based on analyzed theoretical ice drift data and other diagnostic aids. During subsequent weeks of no data availability the ice edges approach seasonal mean positions.

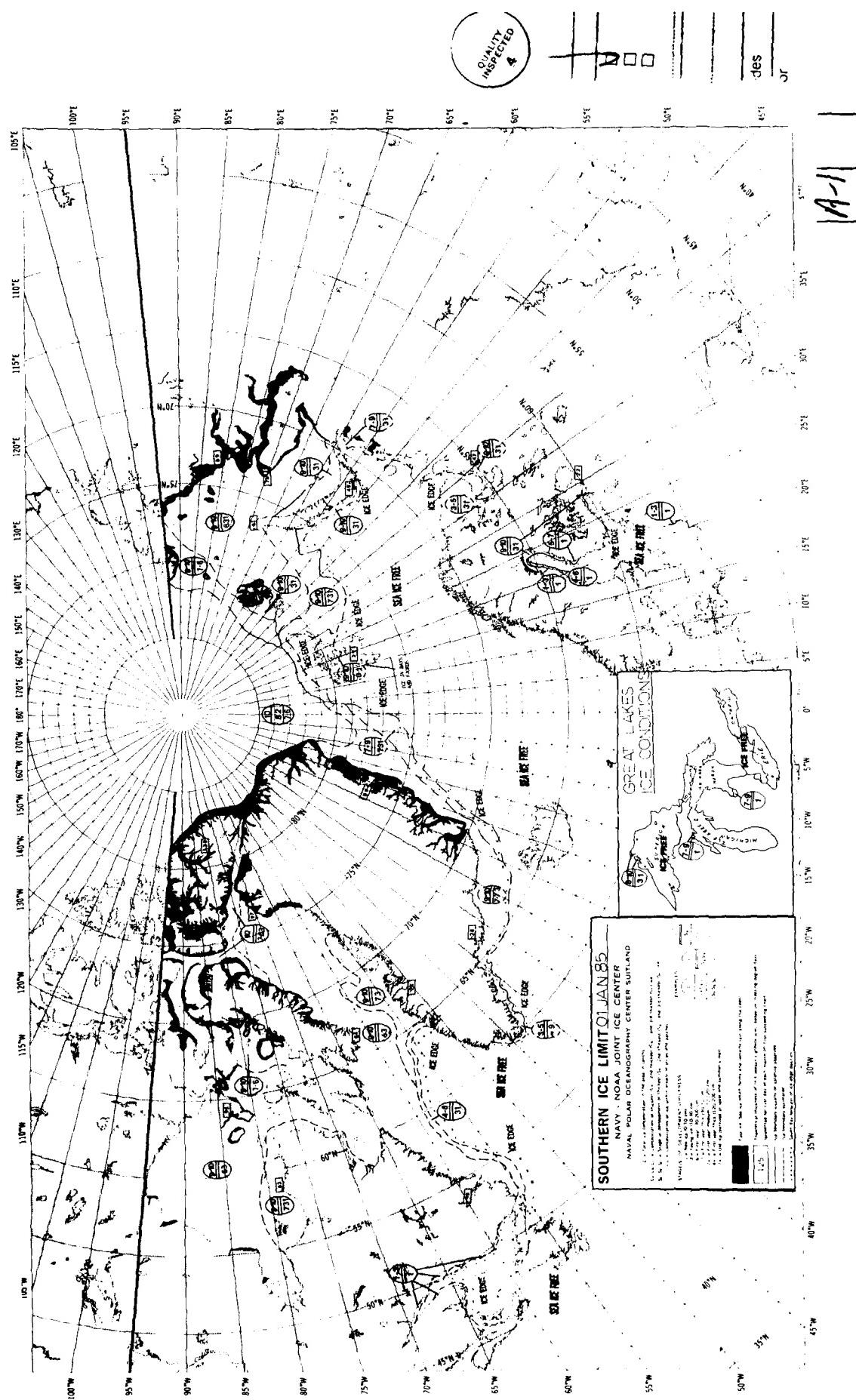
Joint Ice Center
Naval Polar Oceanography Center
4301 Suitland Road
Washington, DC 20390-5180

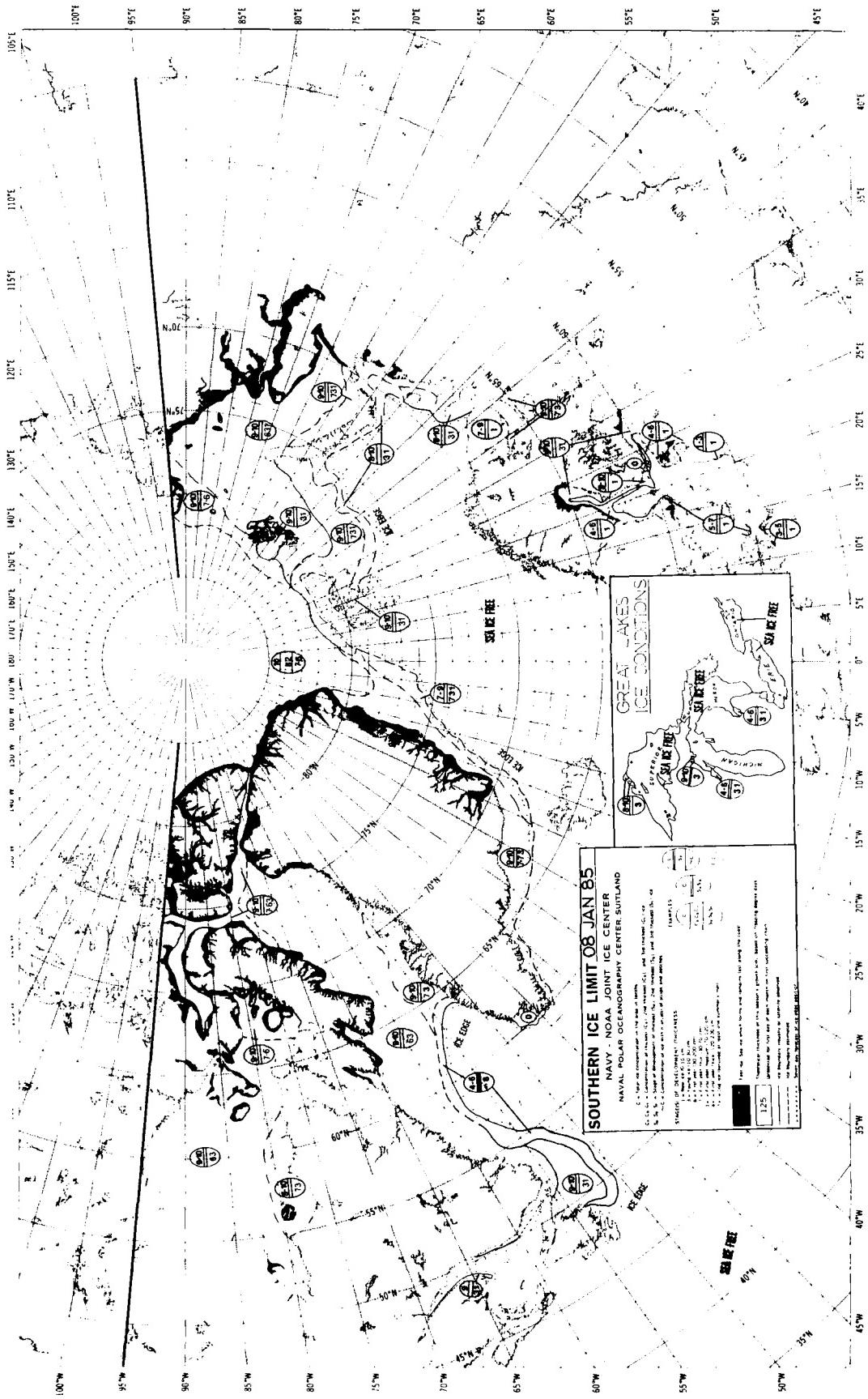
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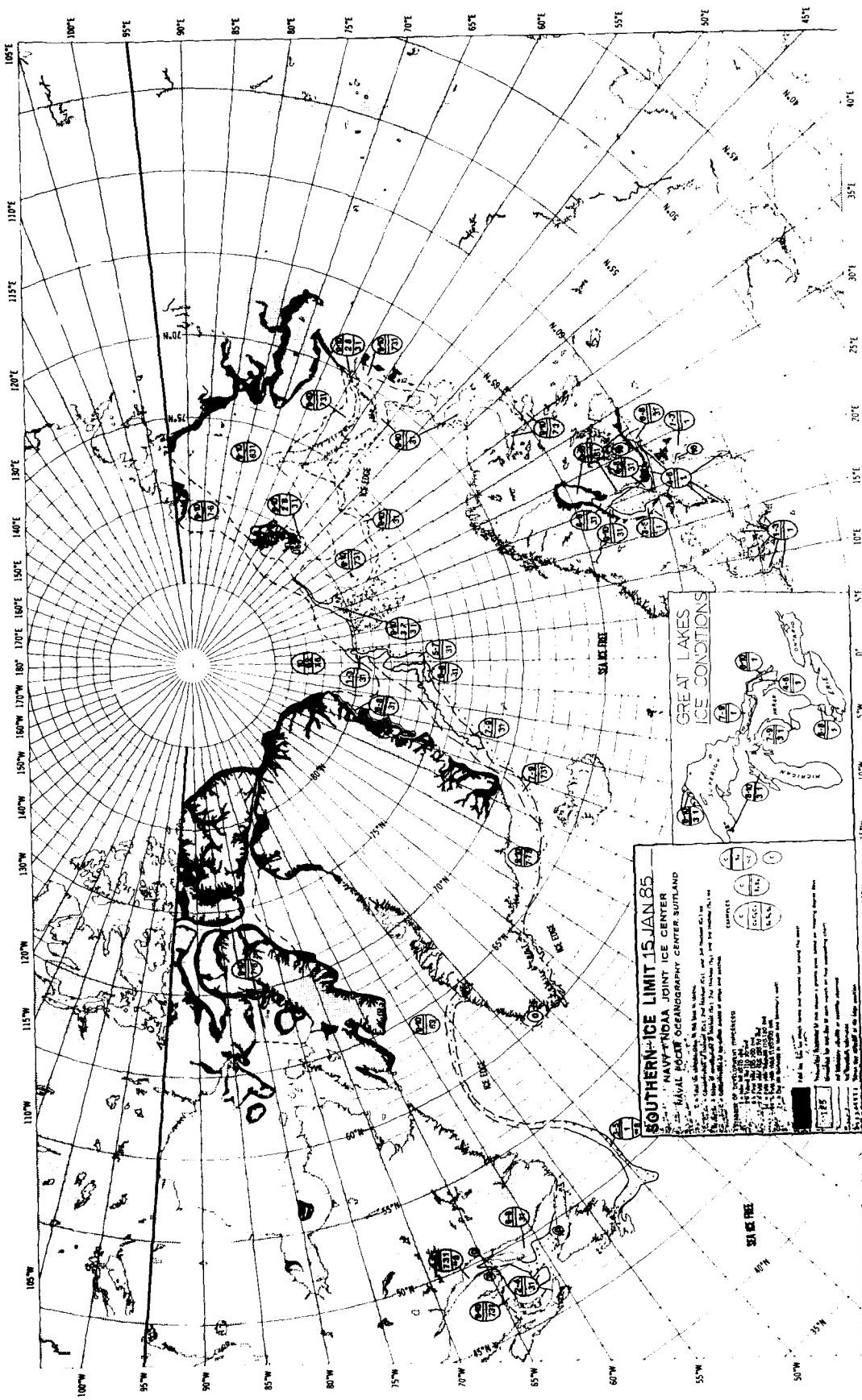
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) These are approximately 7-days analysis of sea ice prepared by the Naval Polar Oceanography Center, Suitland, MD. Included are ice concentration and ice thickness (aoe).		

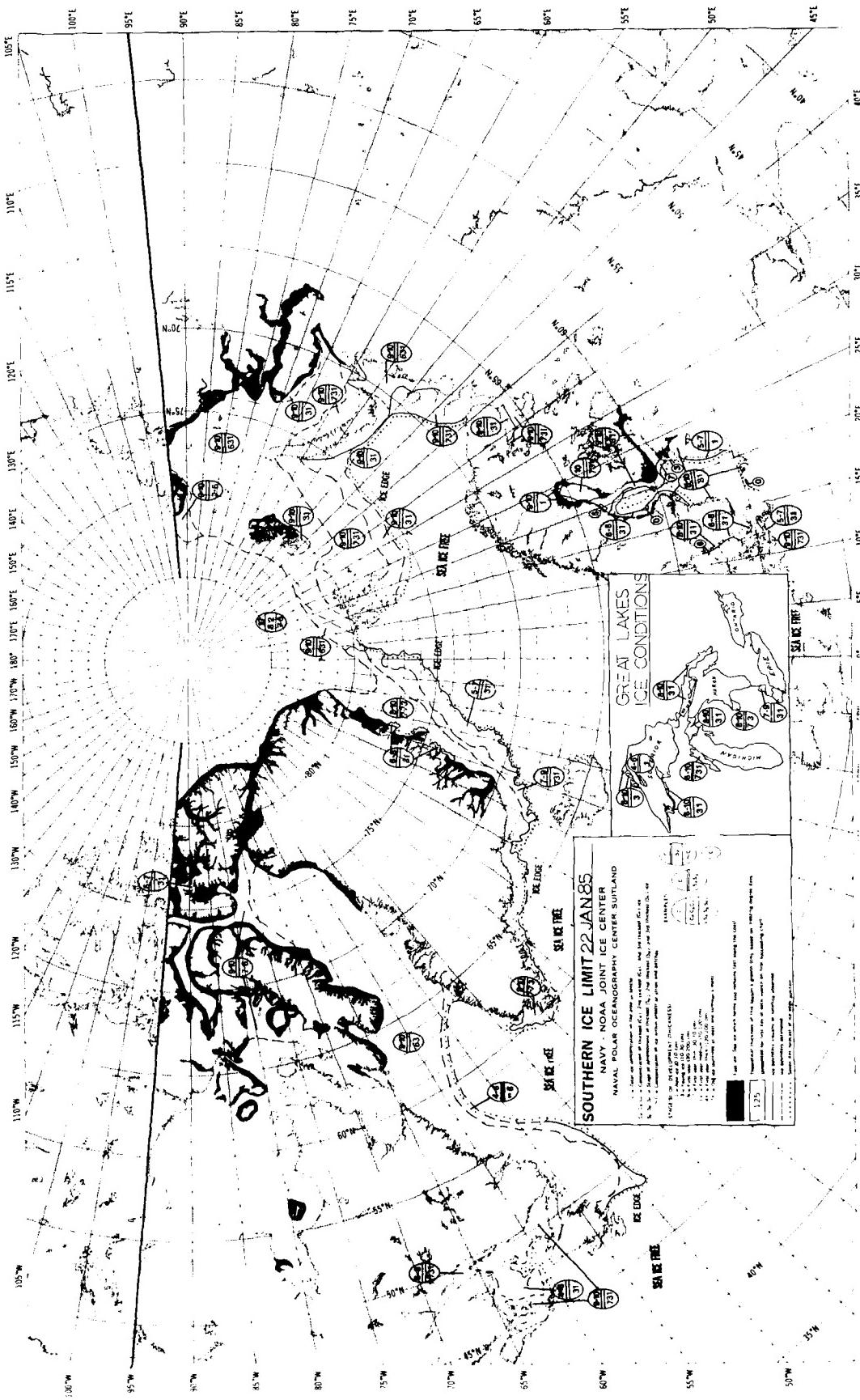
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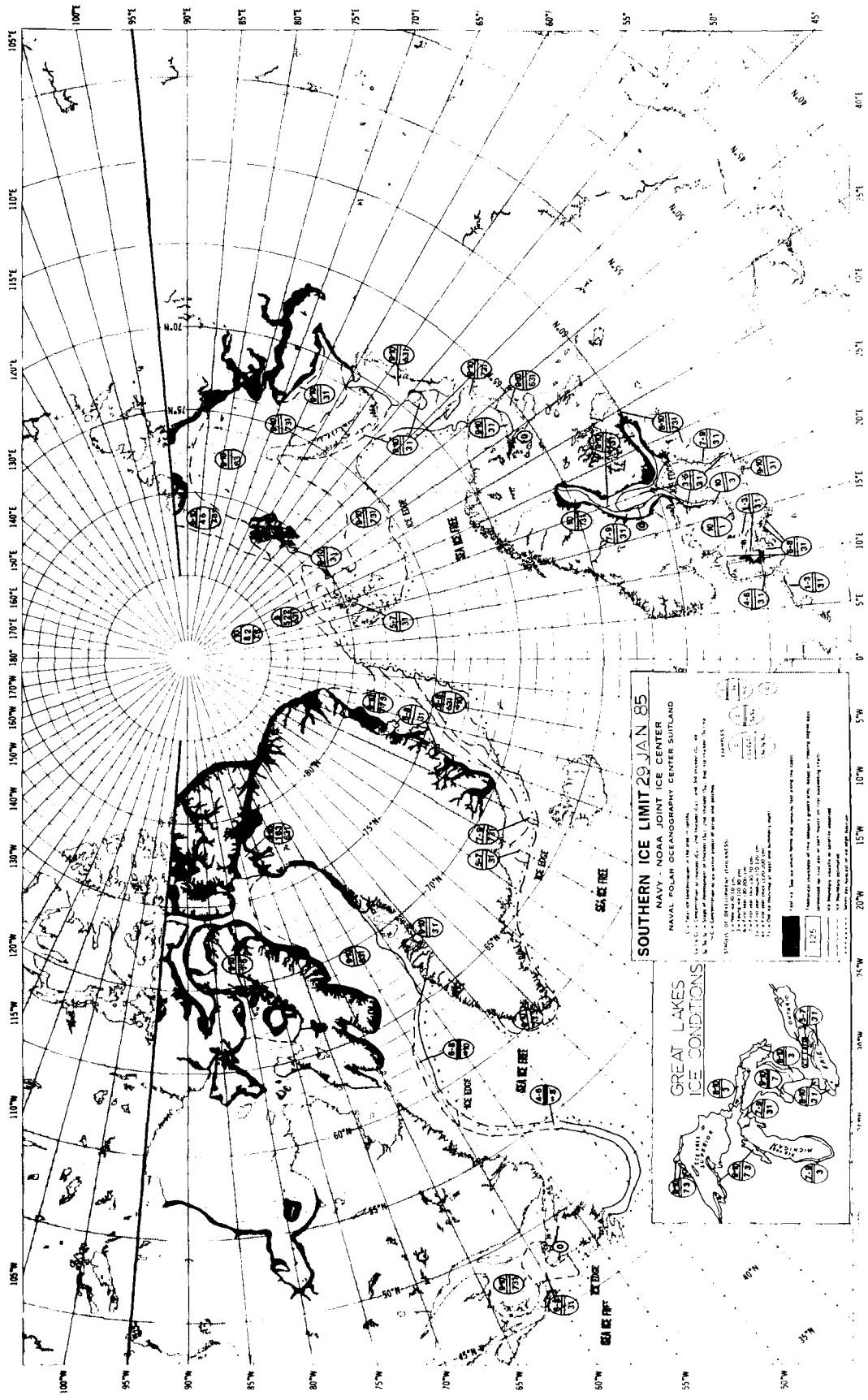
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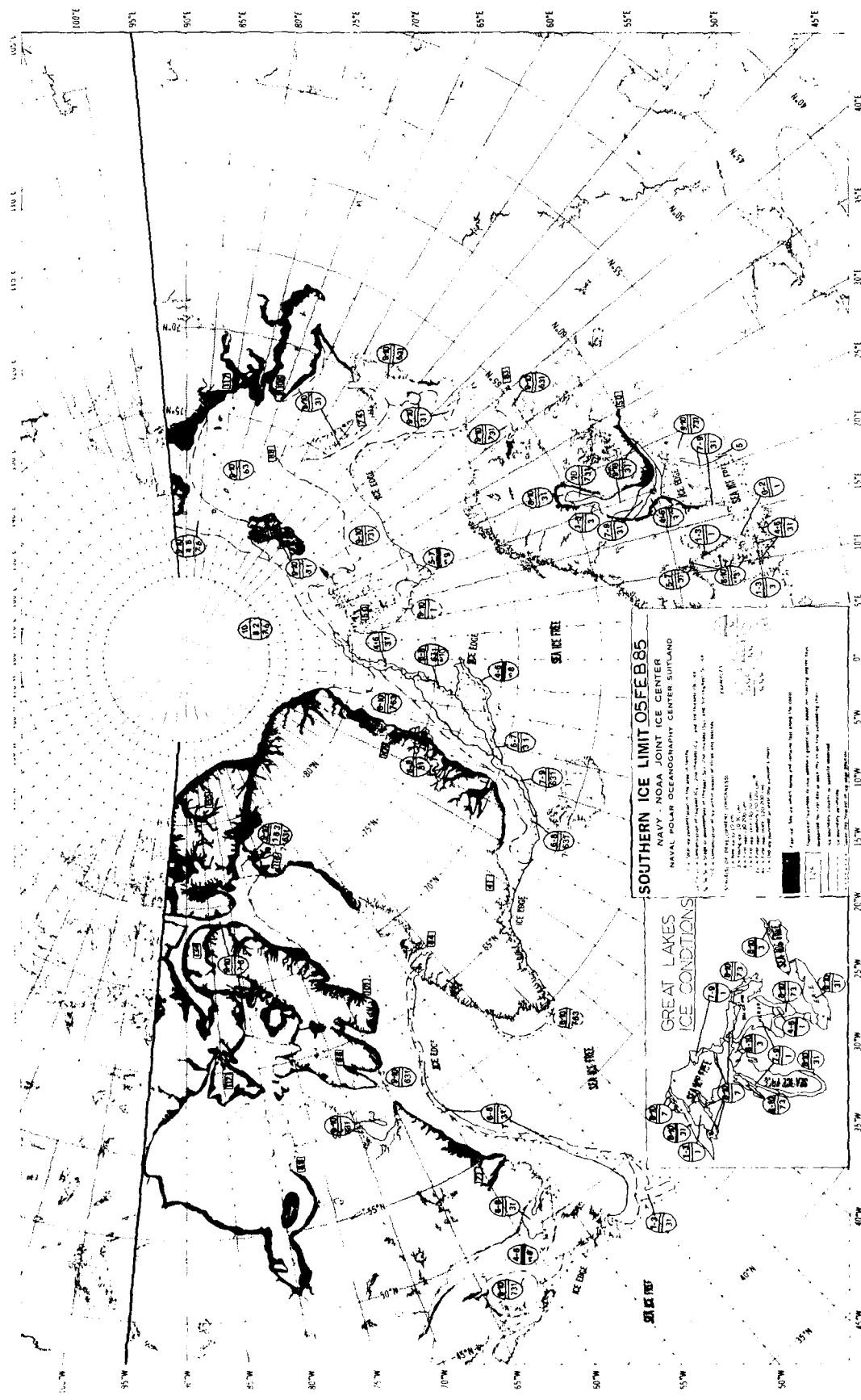












SOUTHERN ICE LIMIT 12 FEB 85

NAVY NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUTLAND

Map showing the location of the Southern Ice Limit, the Great Lakes, and the Great Lakes Ice Conditions. The map includes a grid of latitude and longitude lines, with major lines every 5 degrees. The Great Lakes are shown in the lower right quadrant, with ice conditions indicated by symbols. The Southern Ice Limit is shown as a line extending from the Great Lakes area towards the south and west. The Great Lakes Ice Conditions are indicated by symbols placed along the Great Lakes coastline.

**GREAT LAKES
ICE CONDITIONS**

Map showing the Great Lakes and their ice conditions. The Great Lakes are shown in the lower right quadrant, with ice conditions indicated by symbols placed along the Great Lakes coastline.

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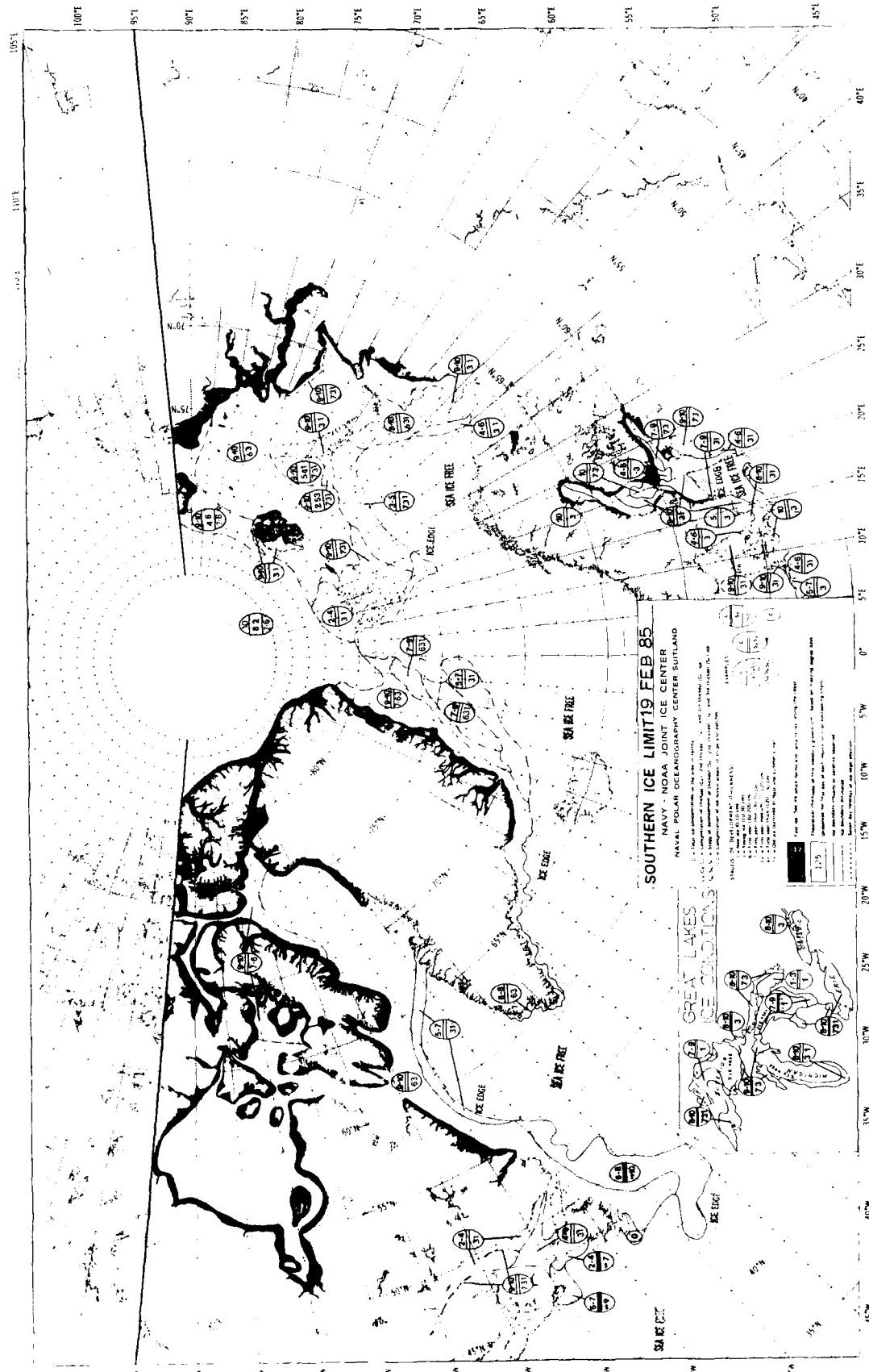
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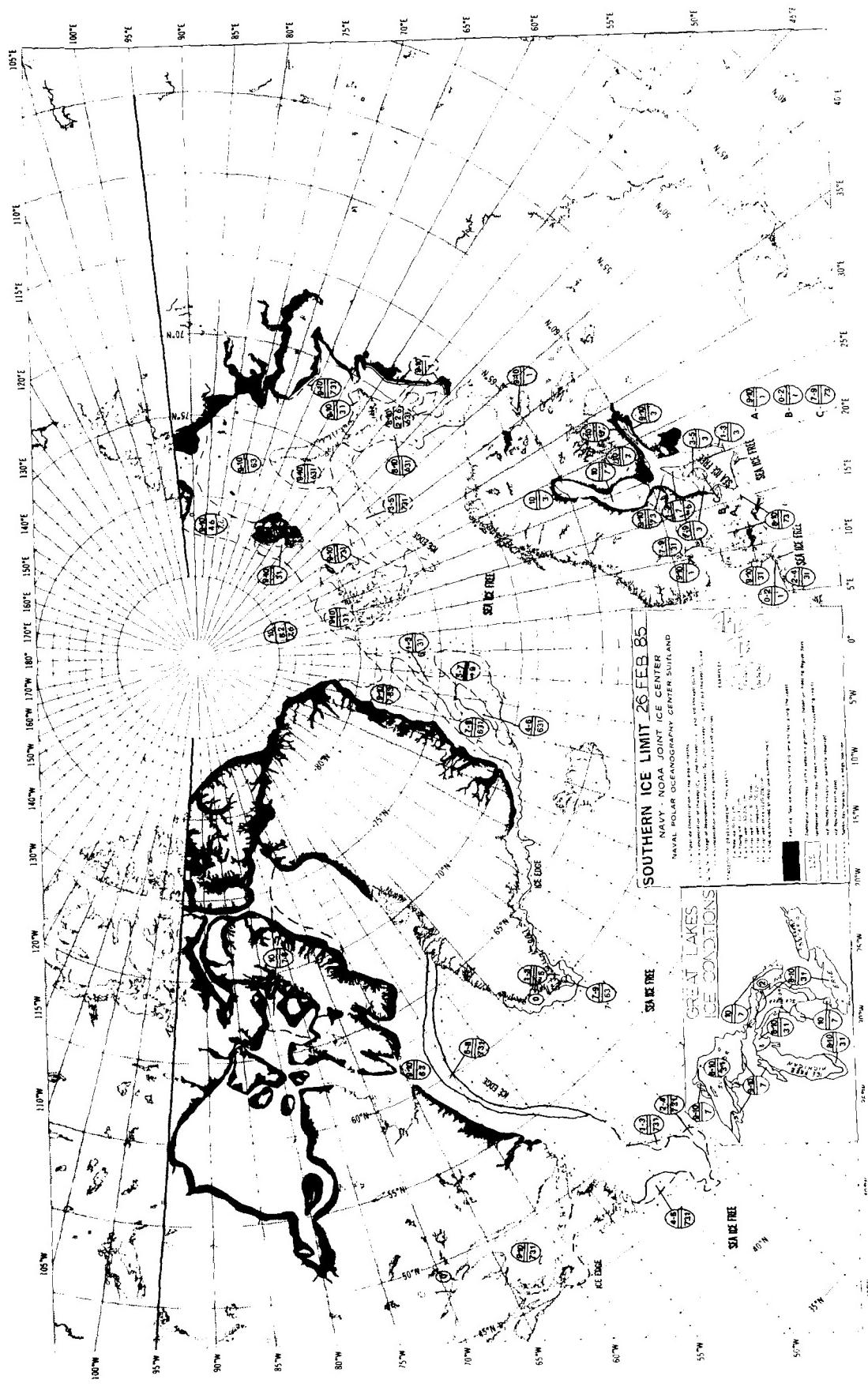
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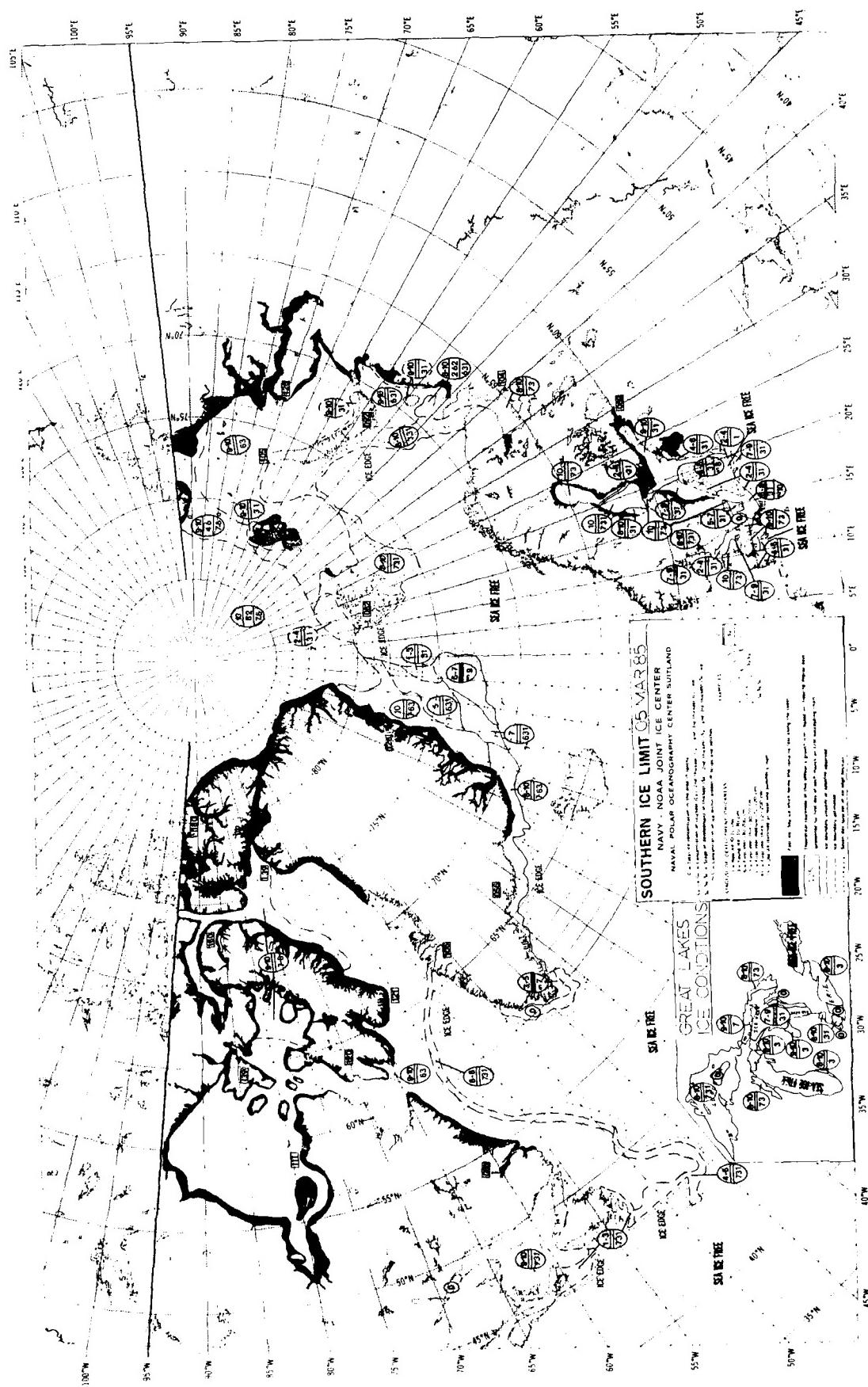
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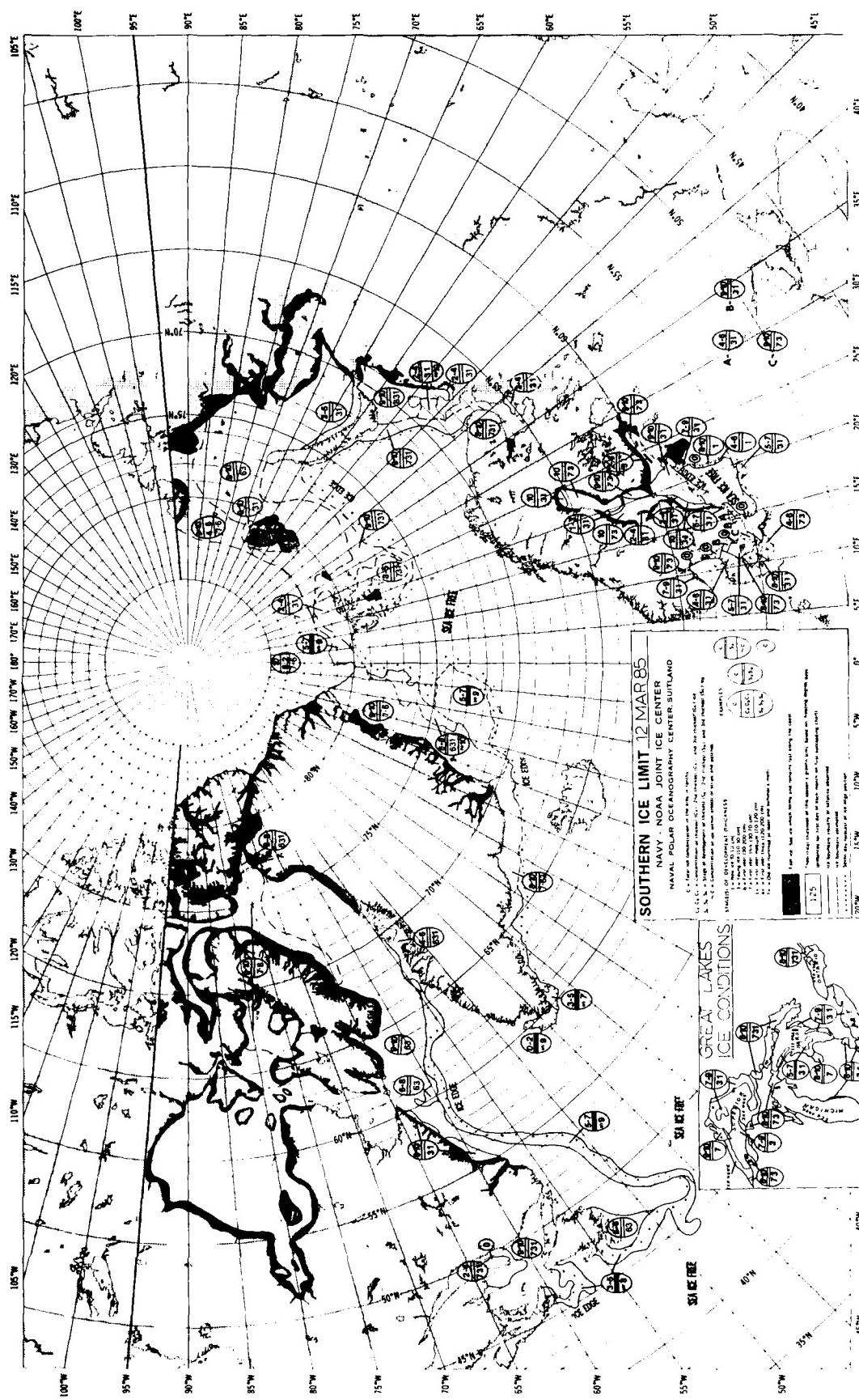
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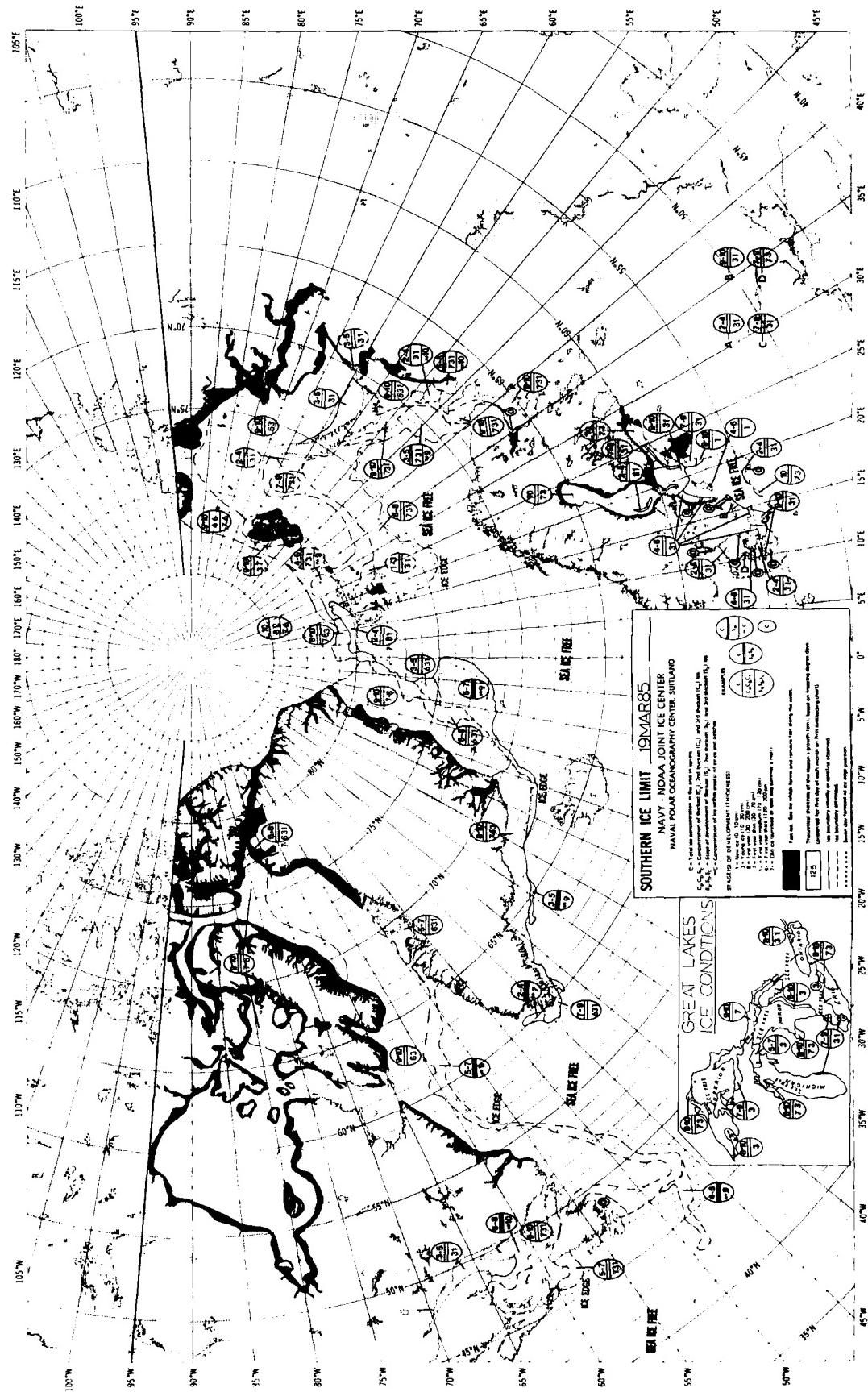
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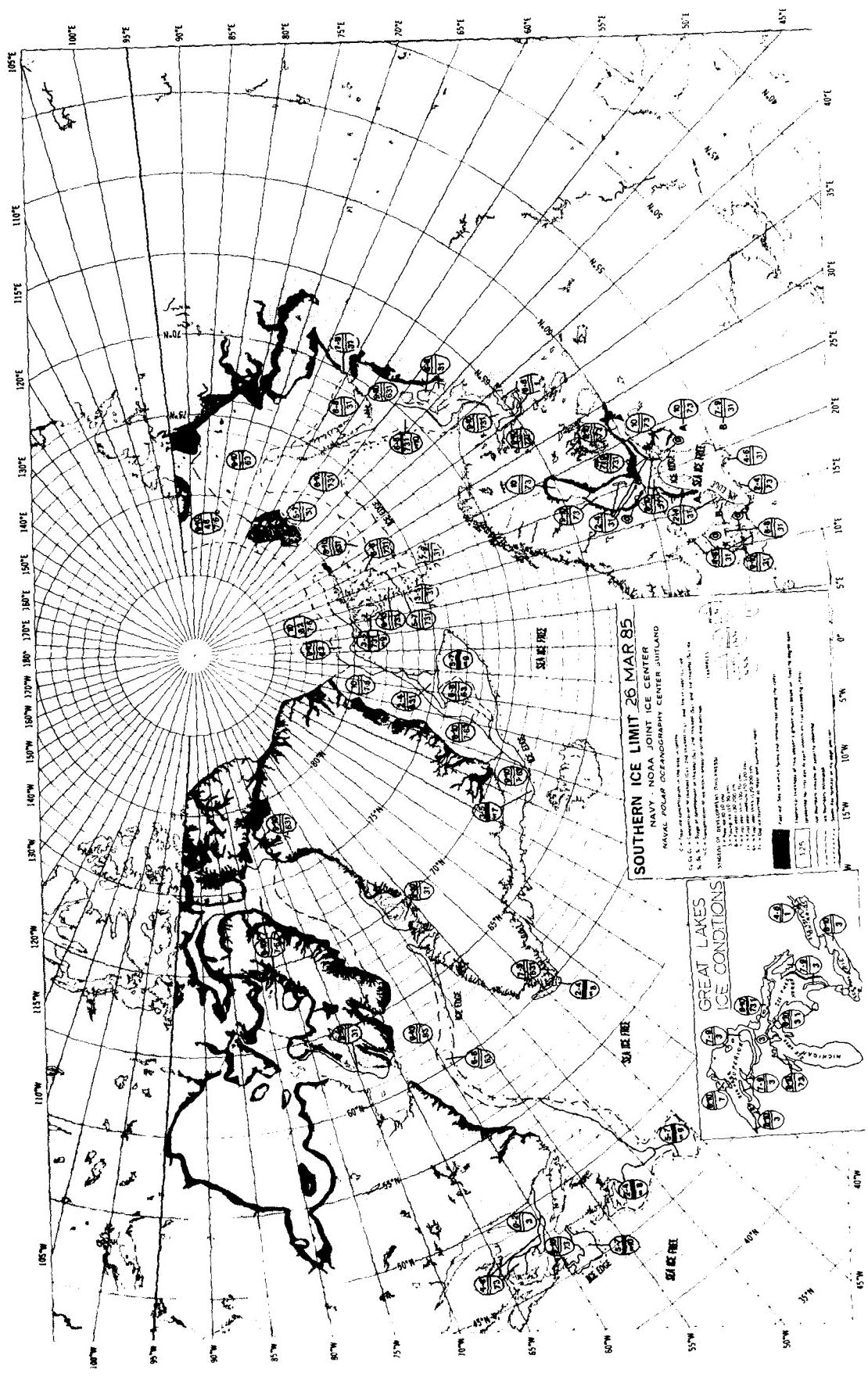


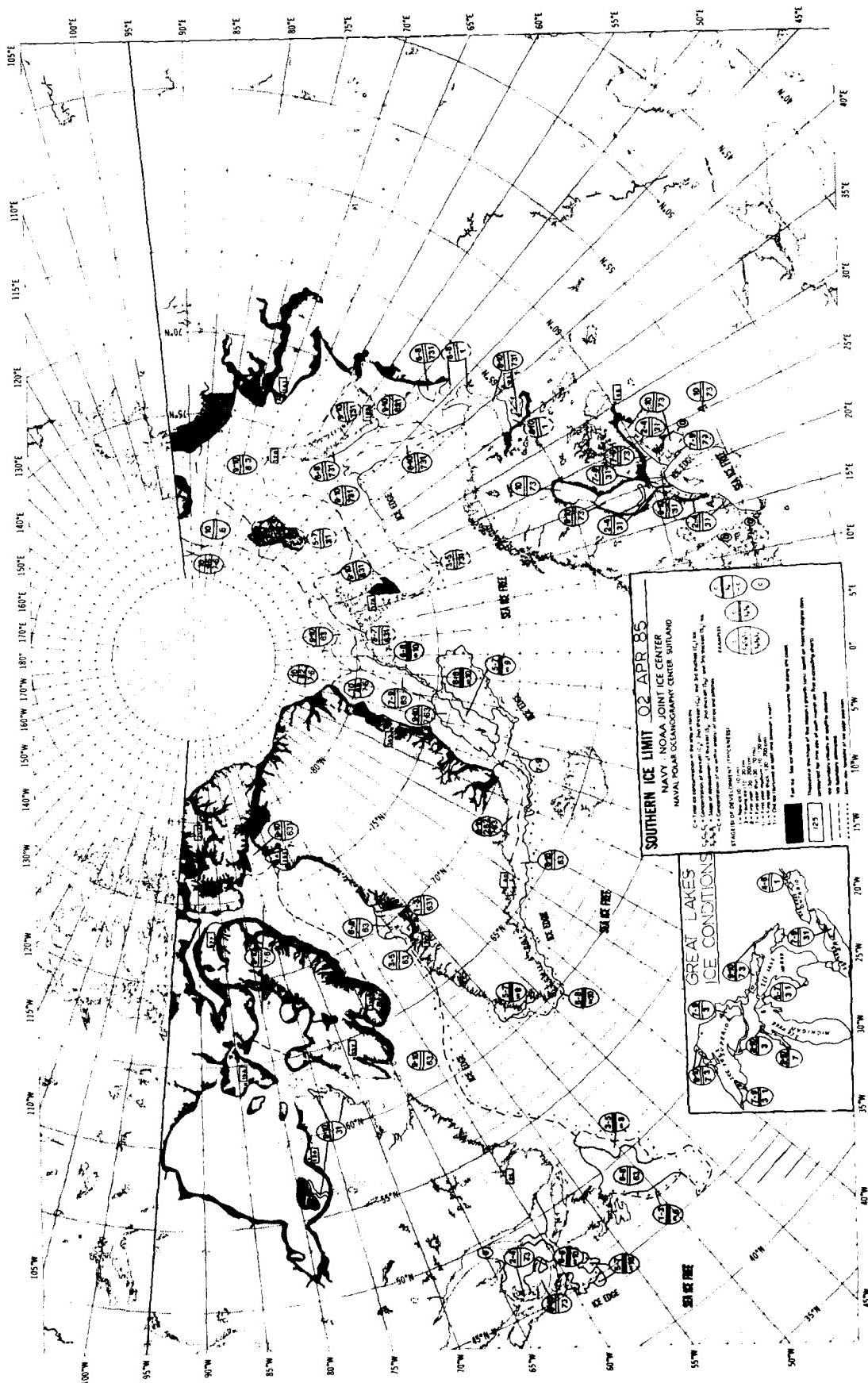


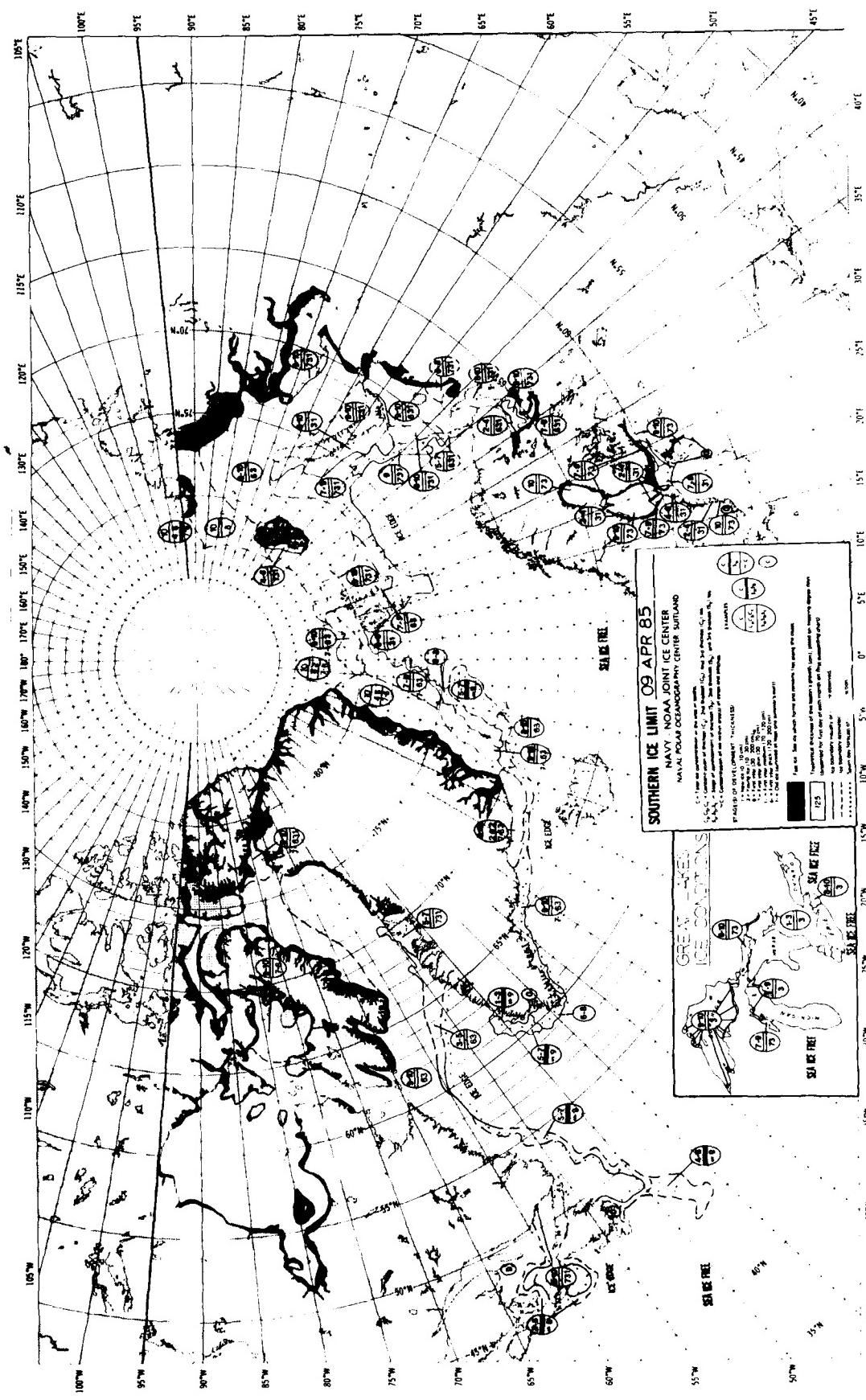


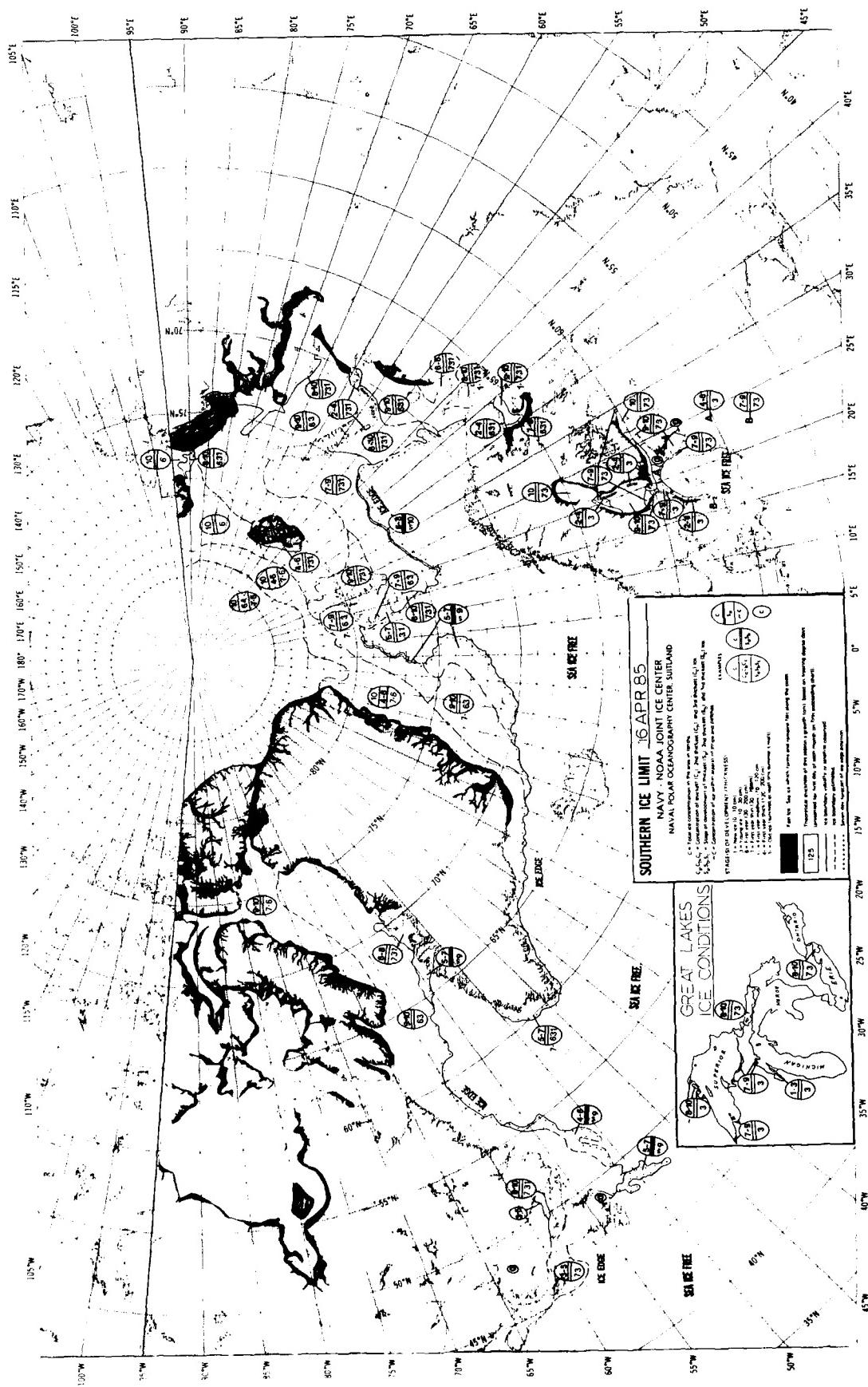


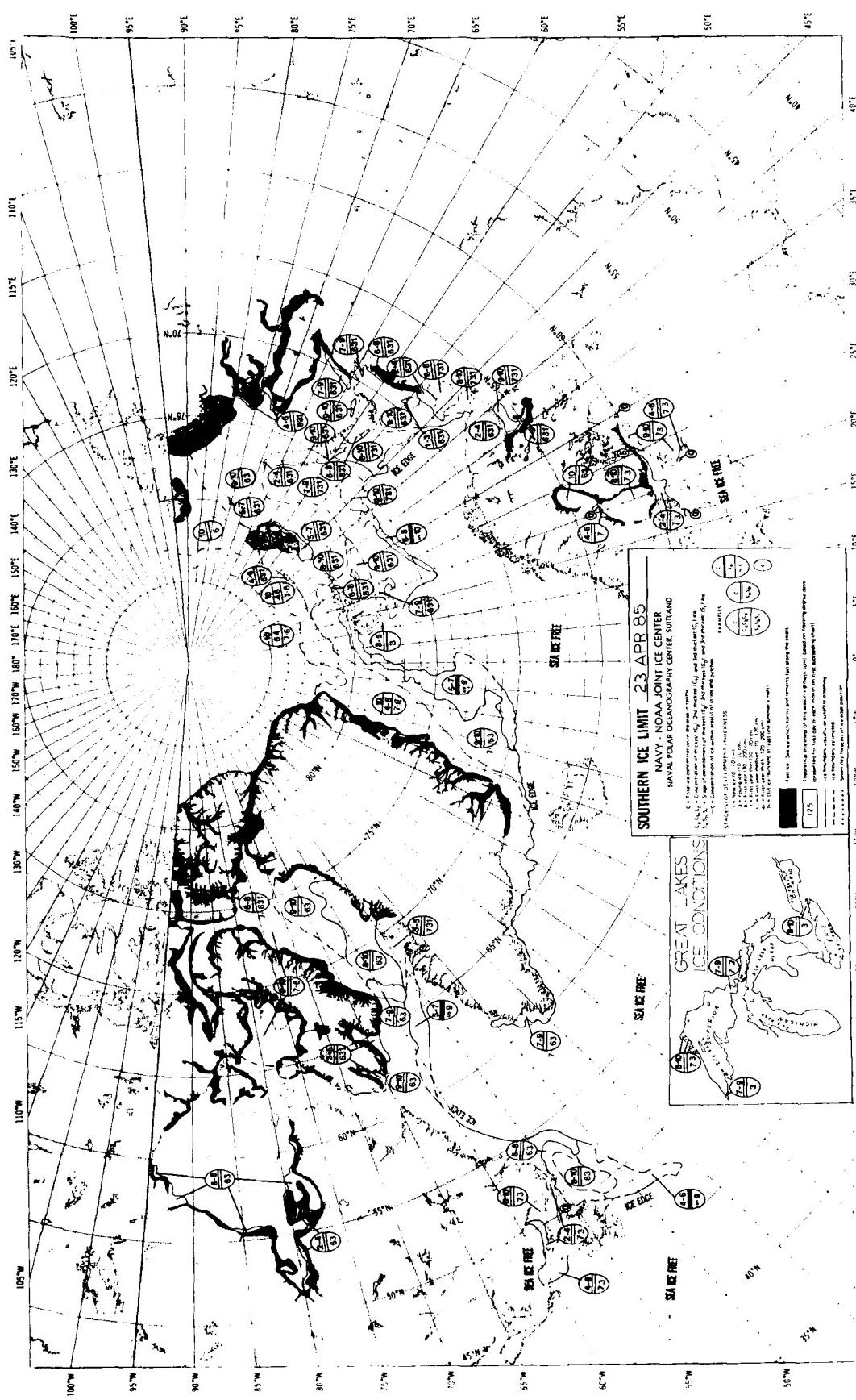


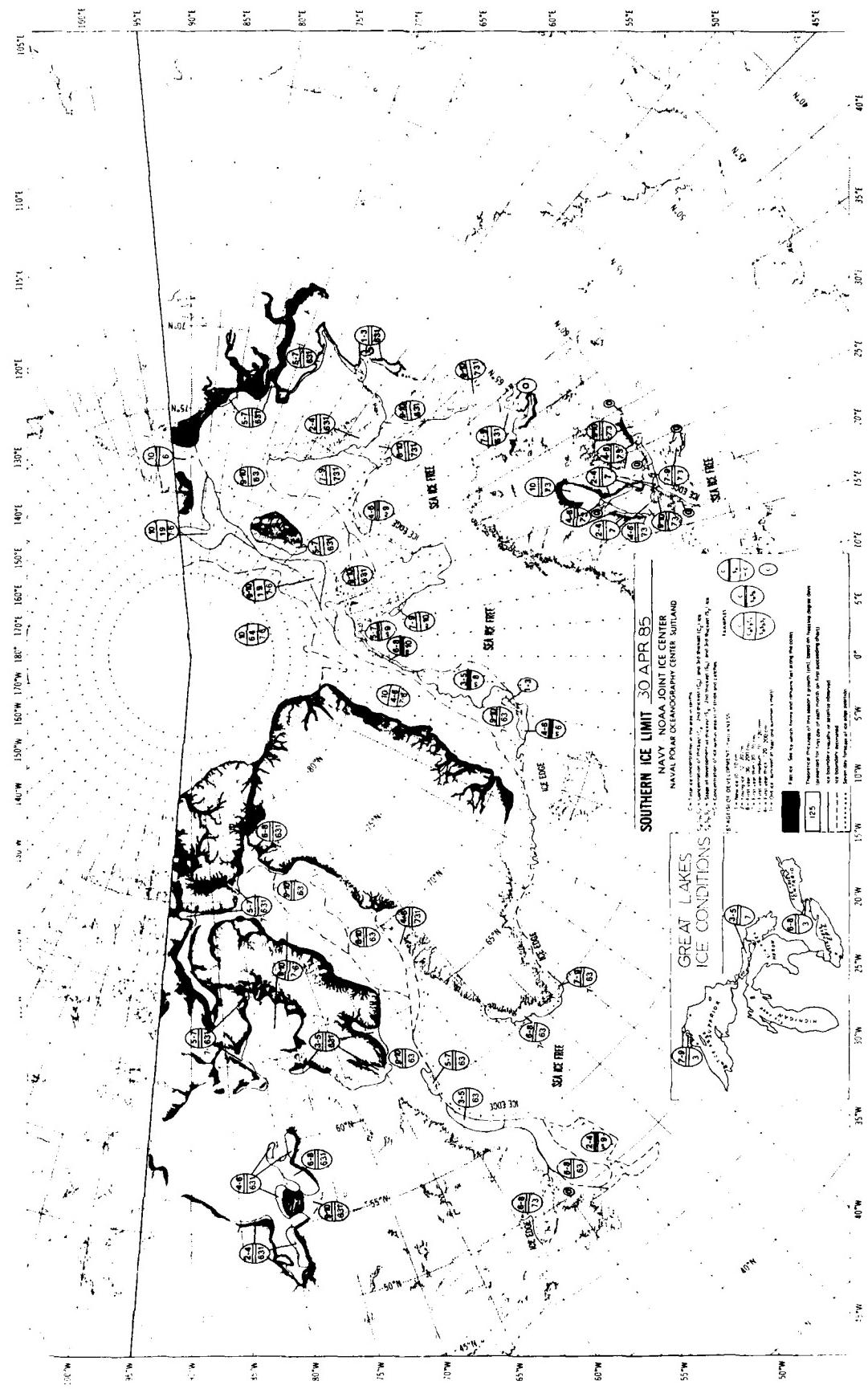


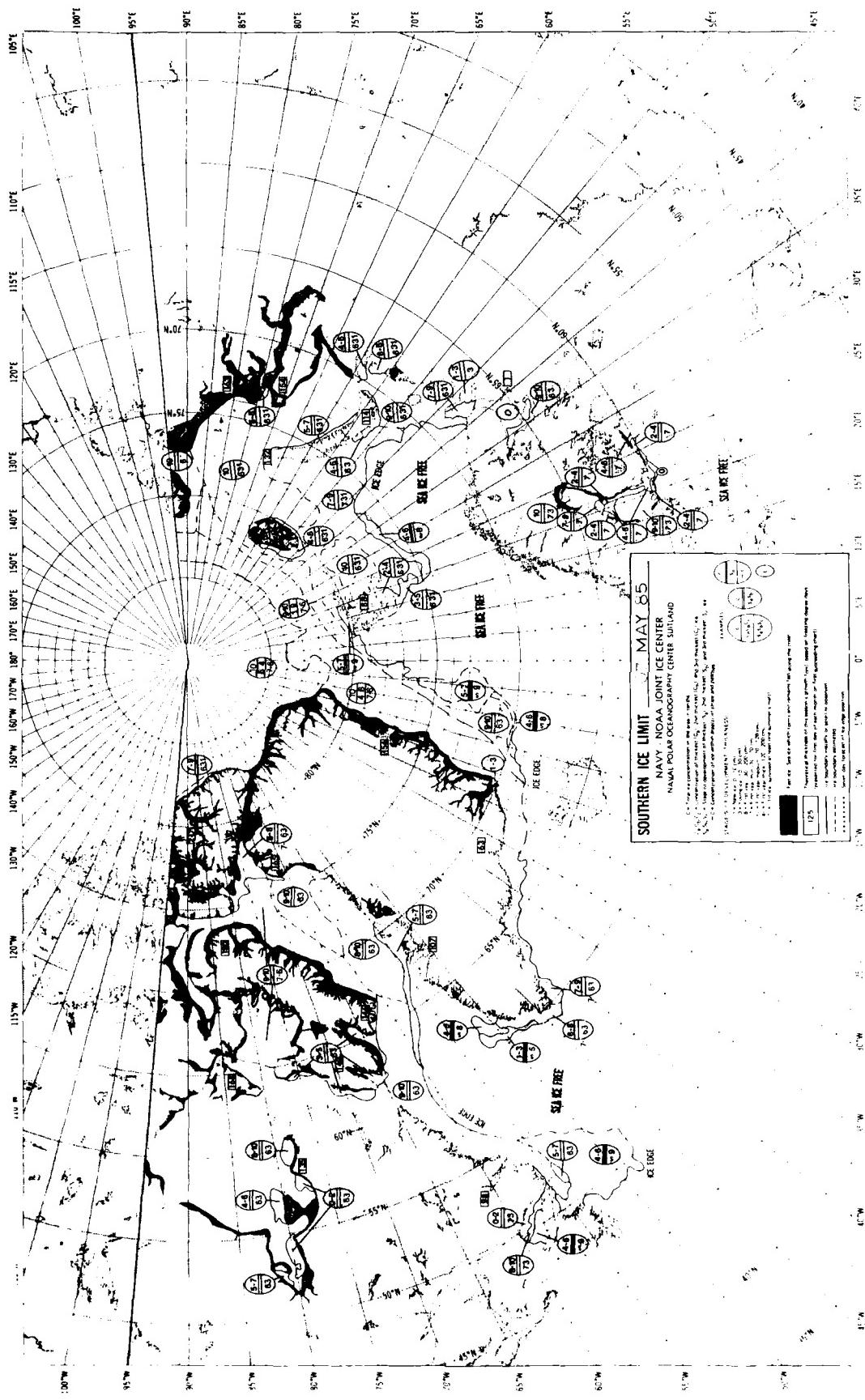


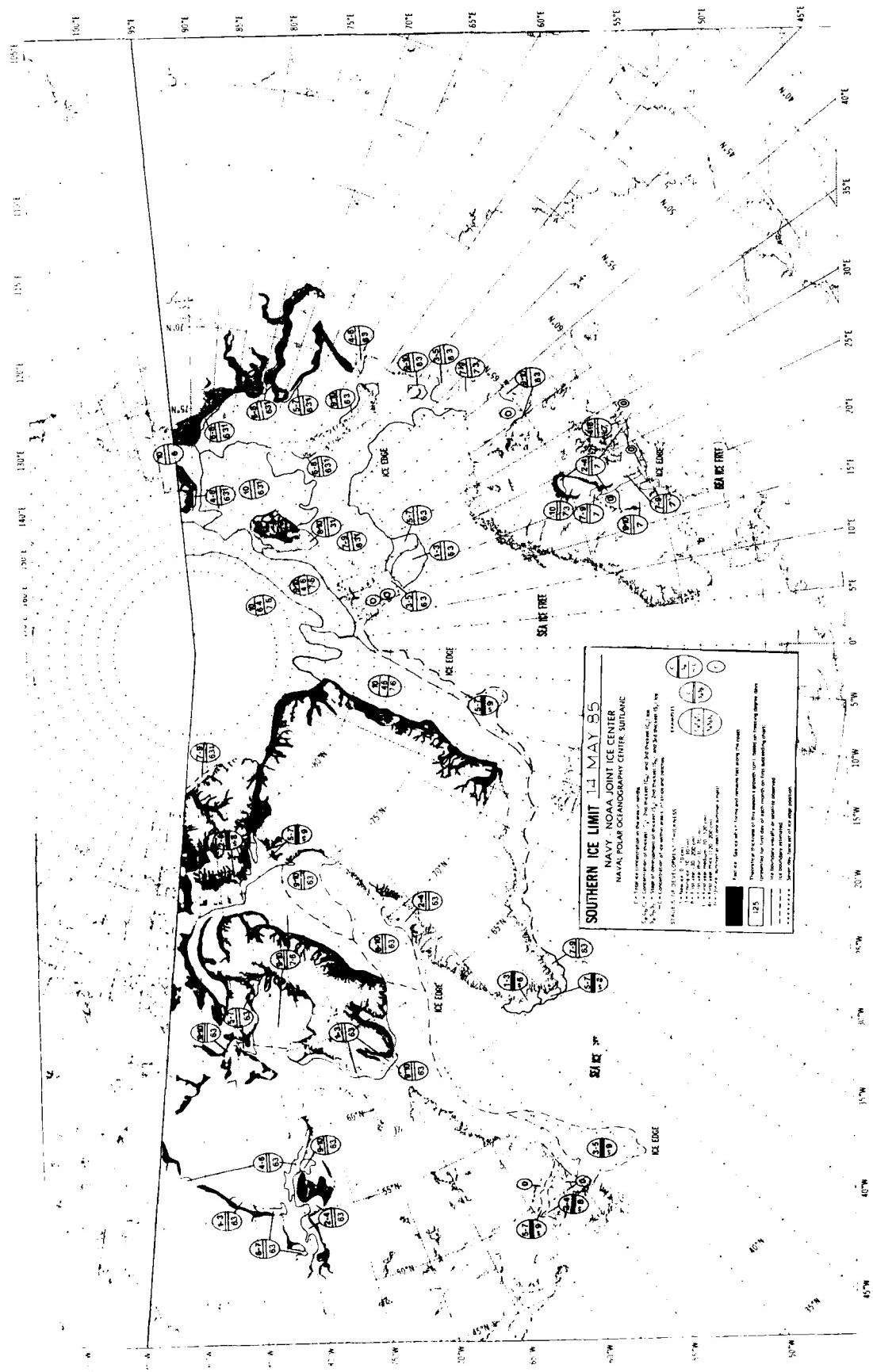


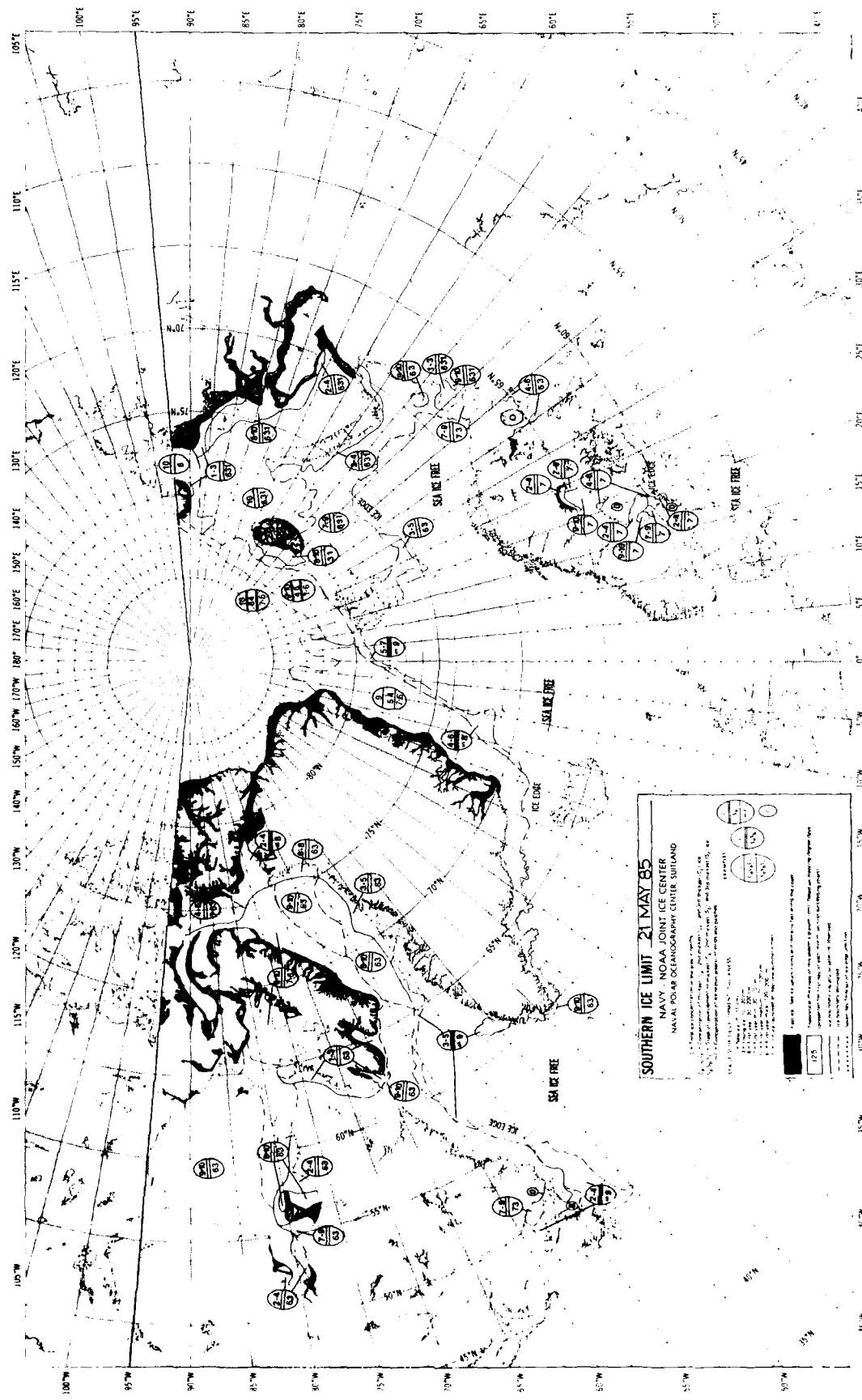


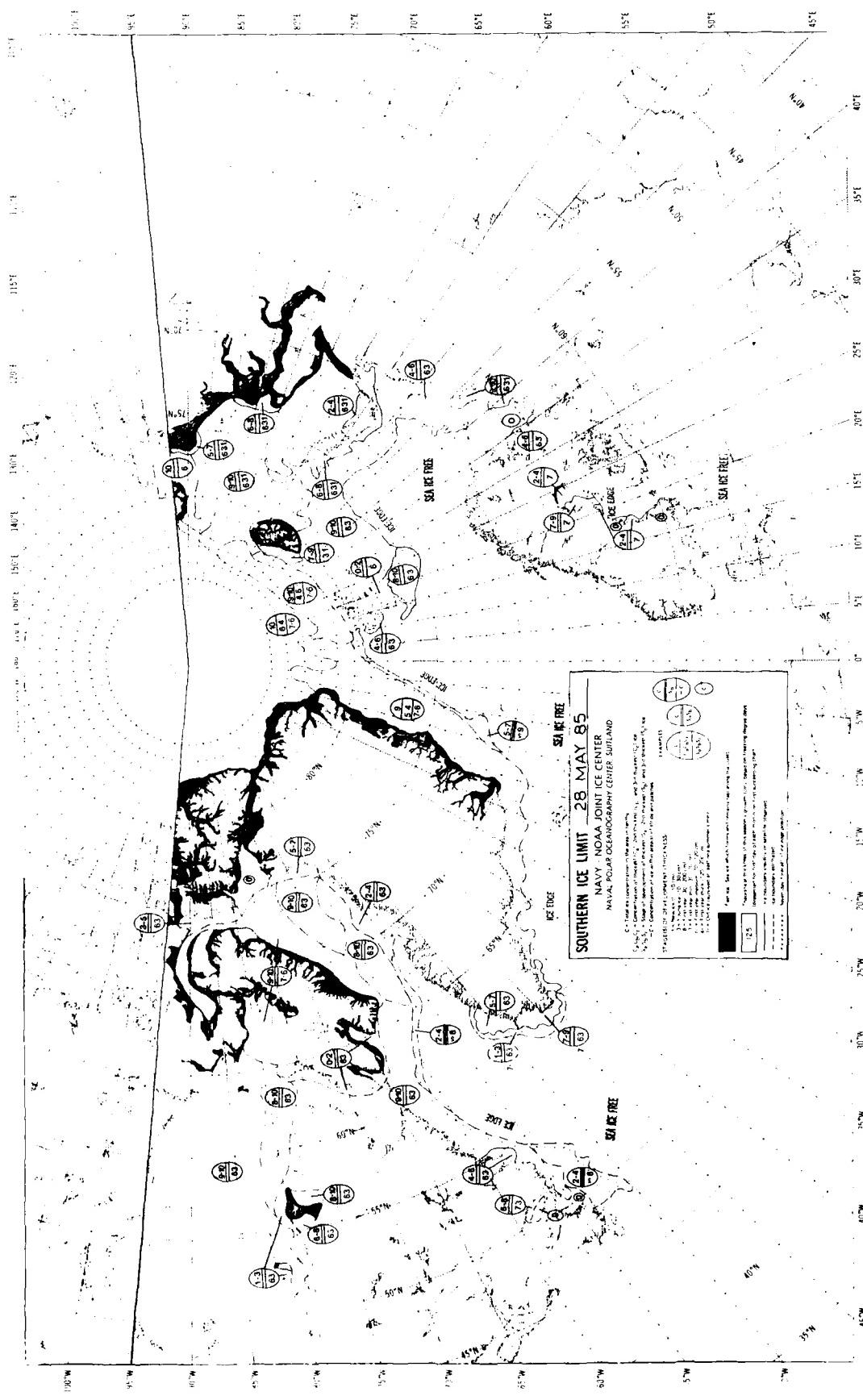


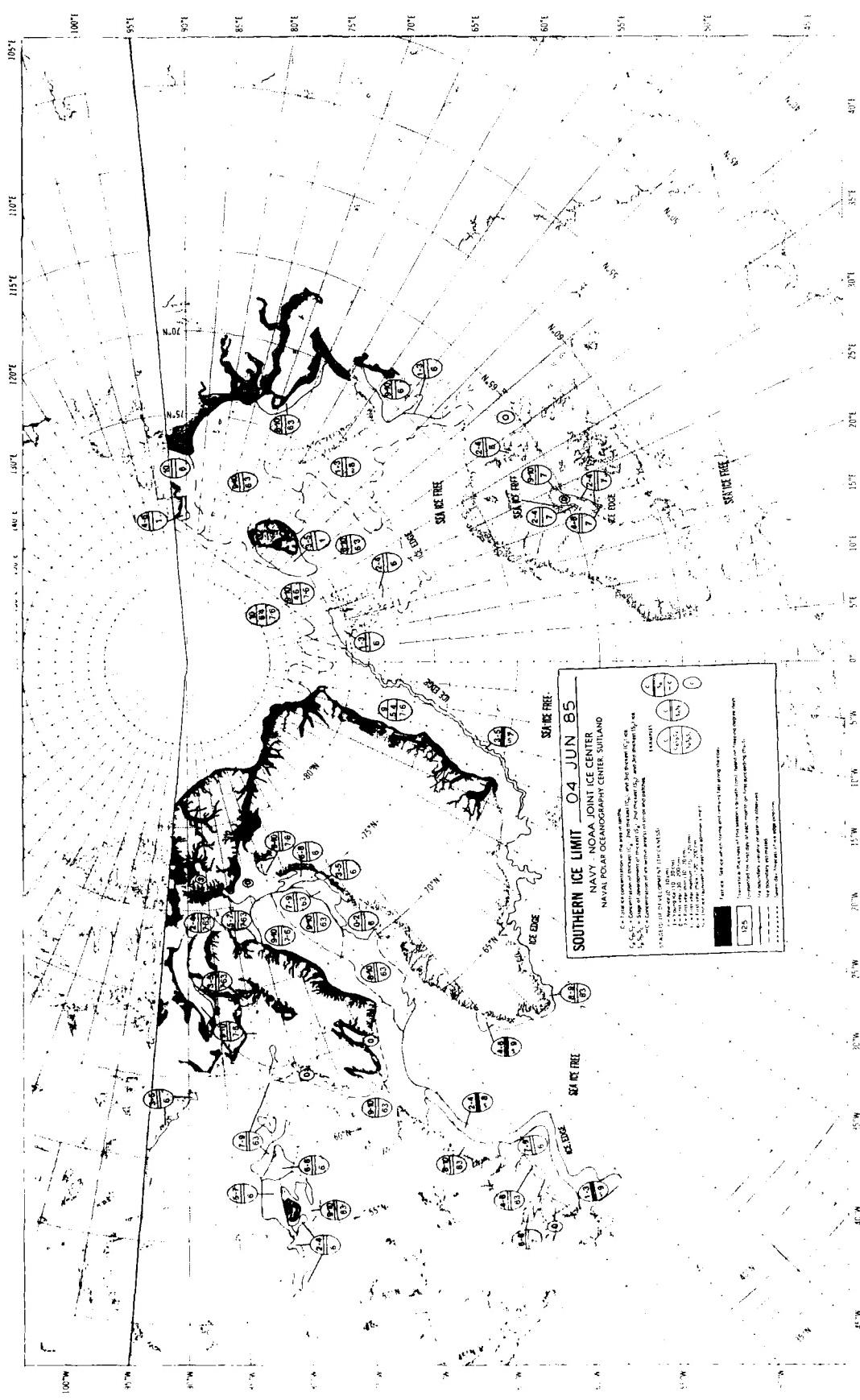


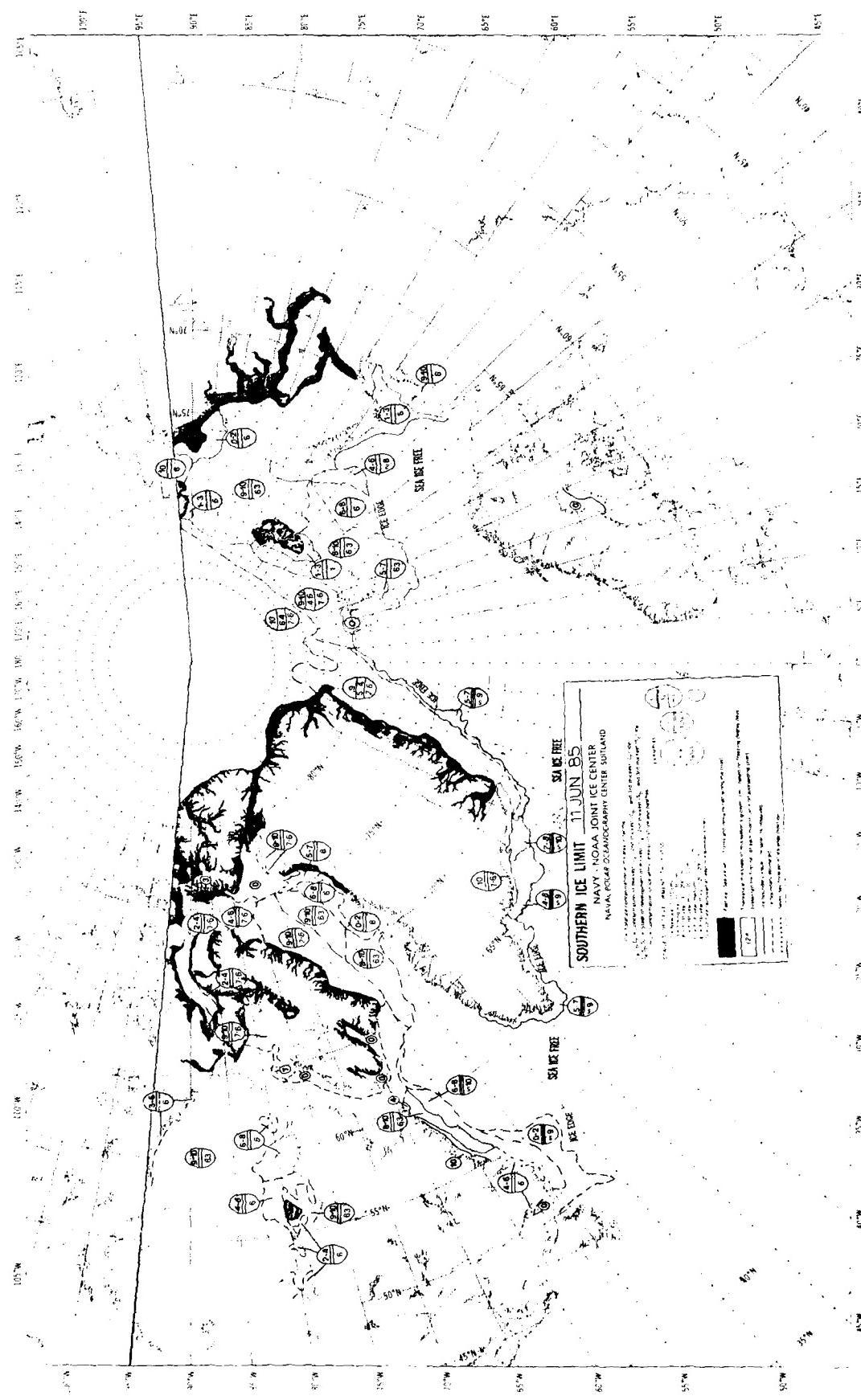


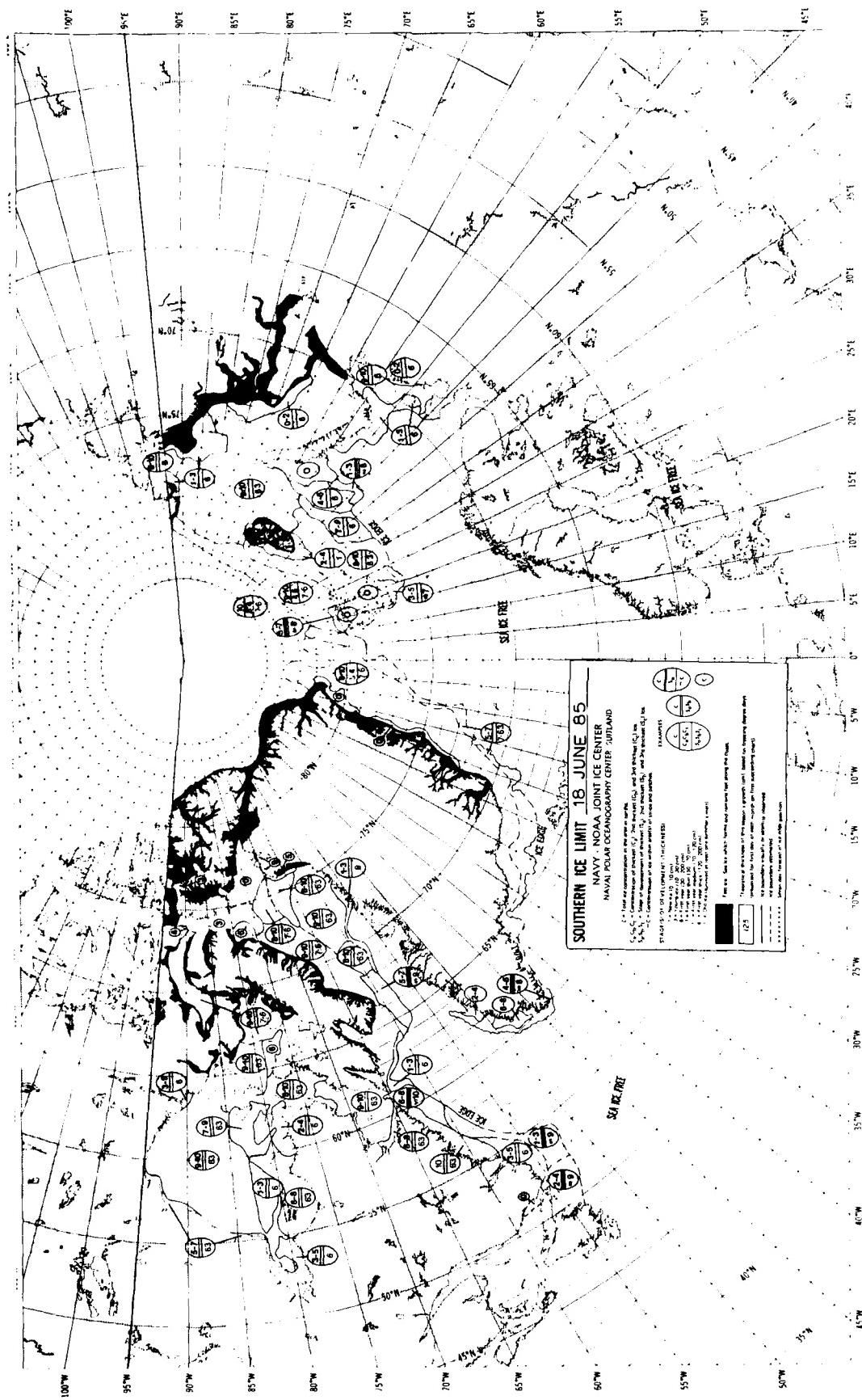


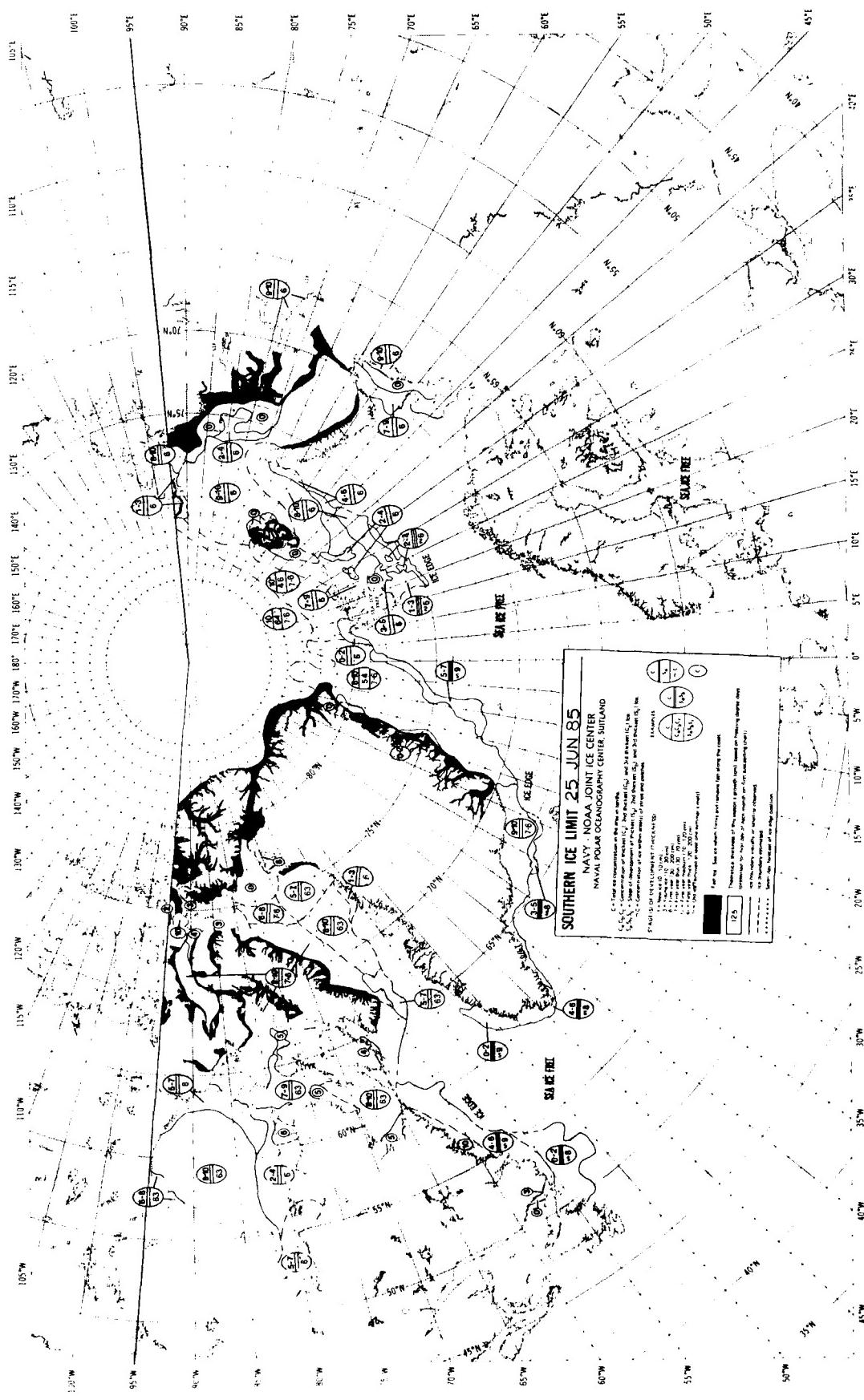


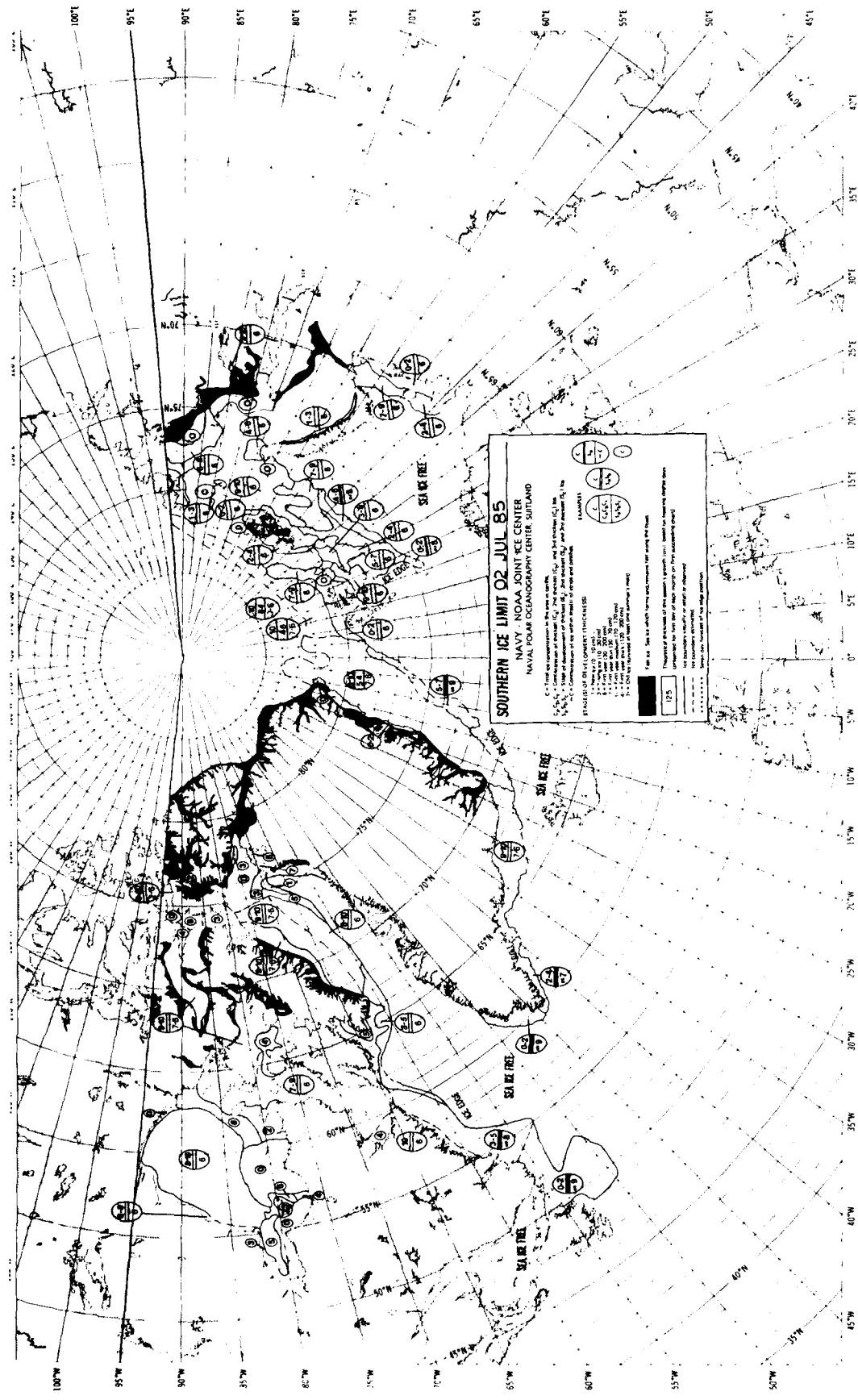


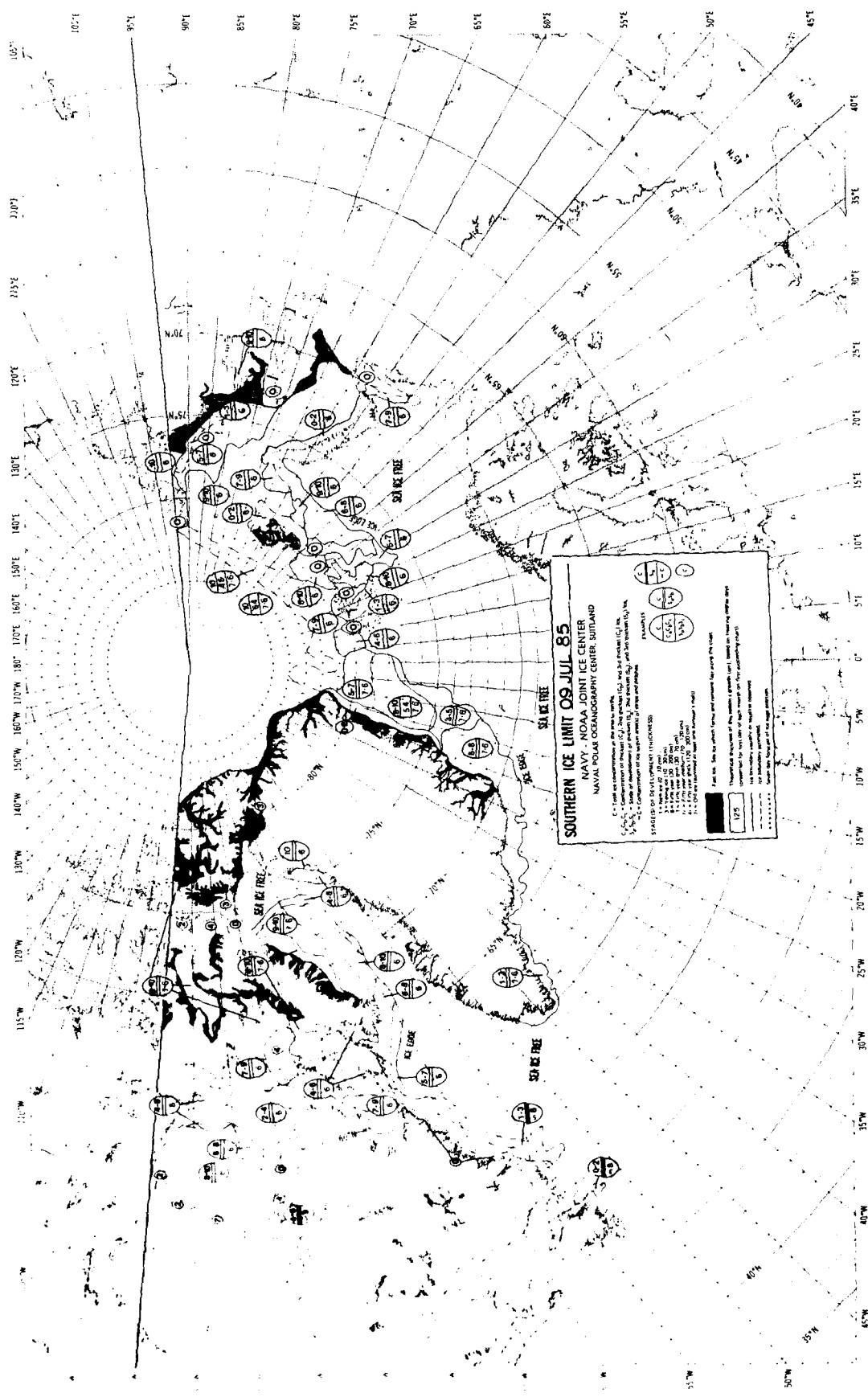


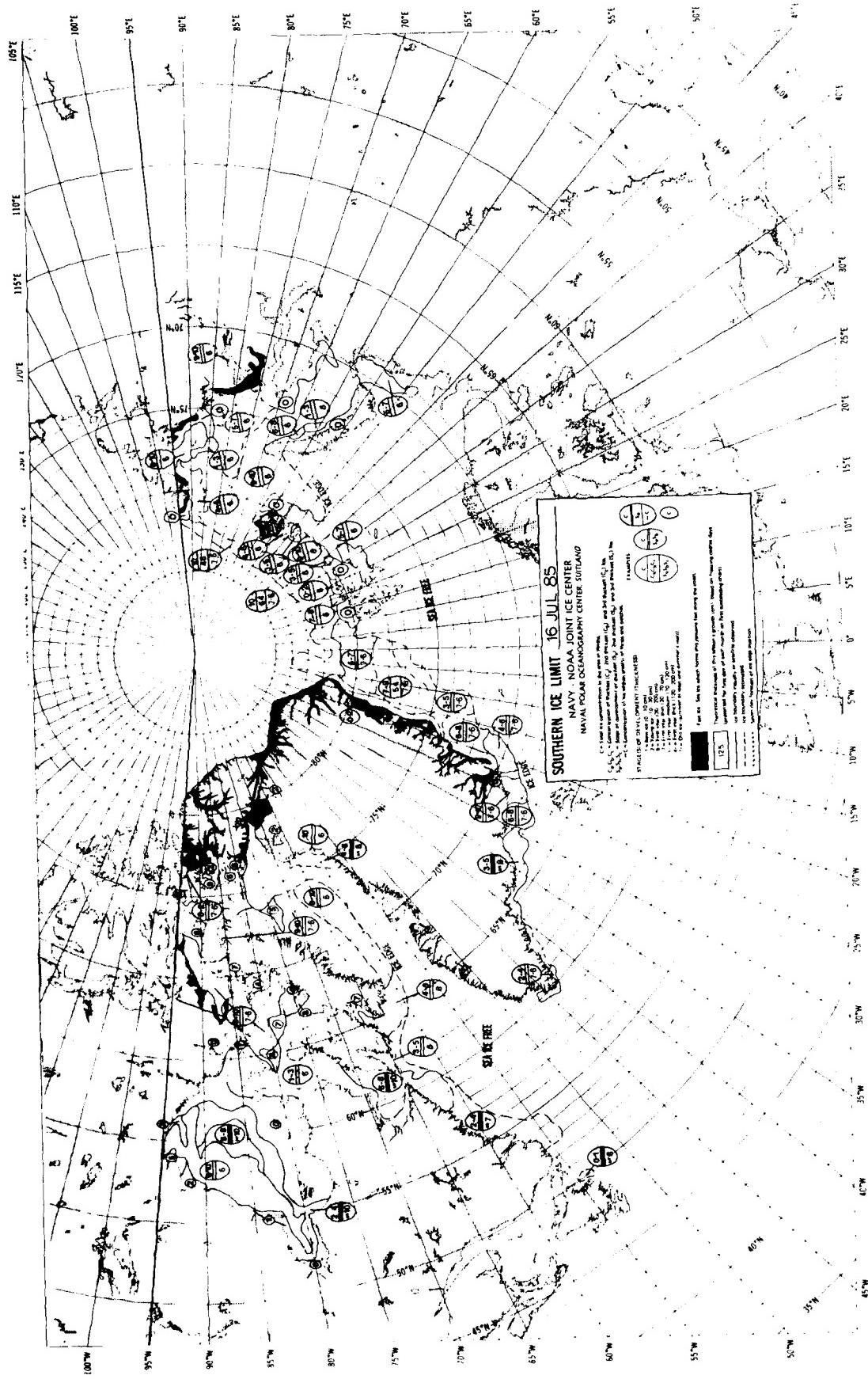


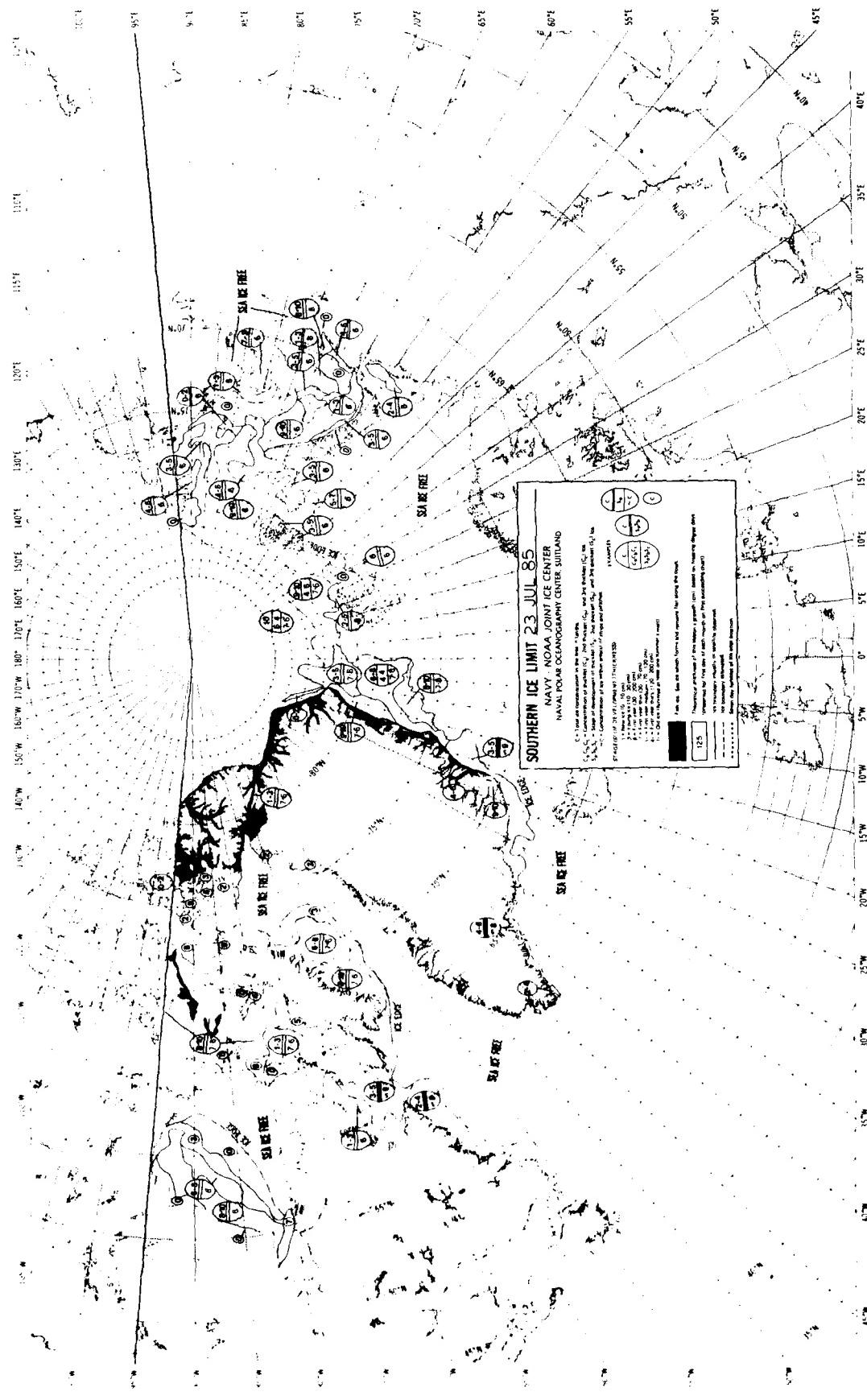


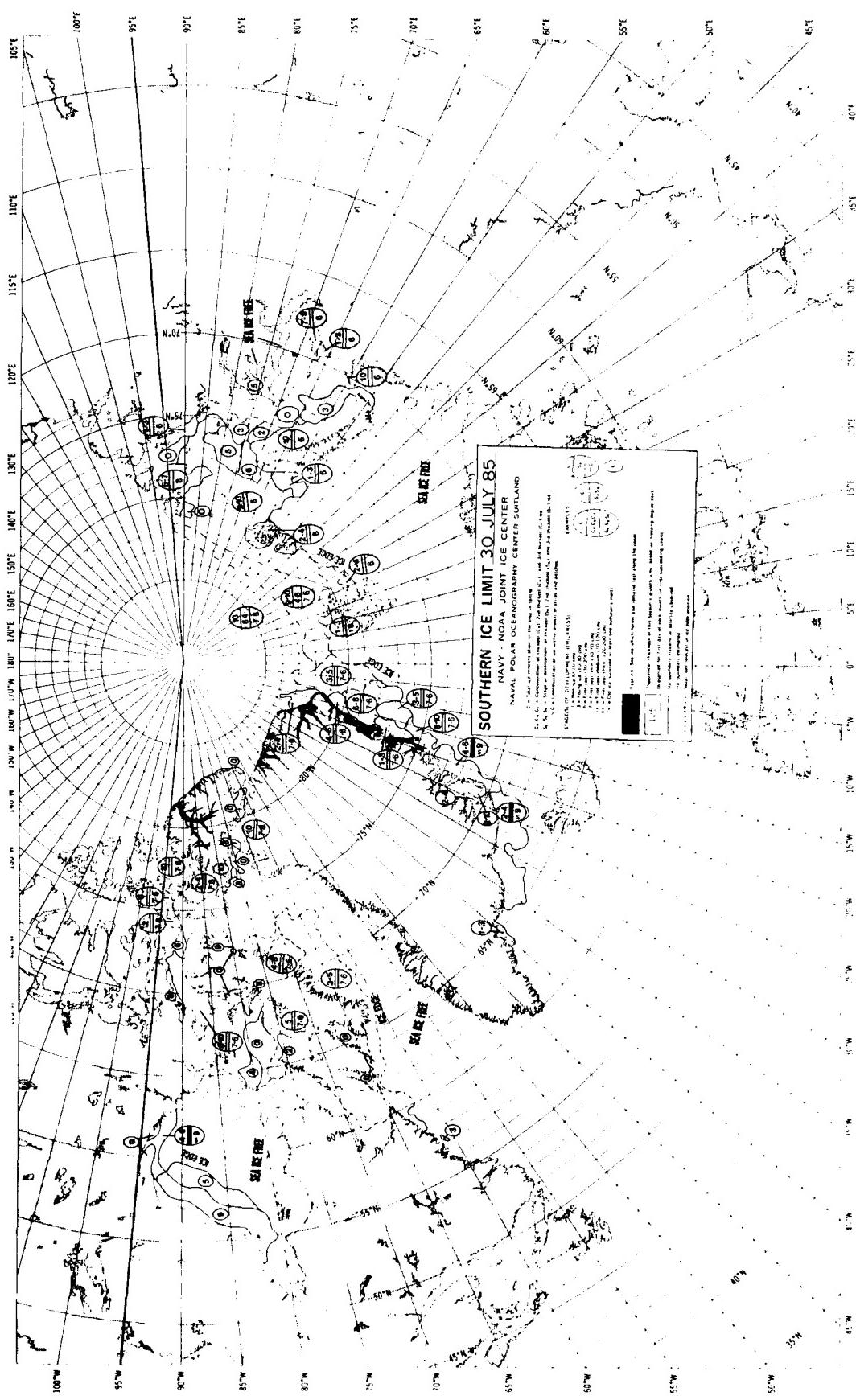


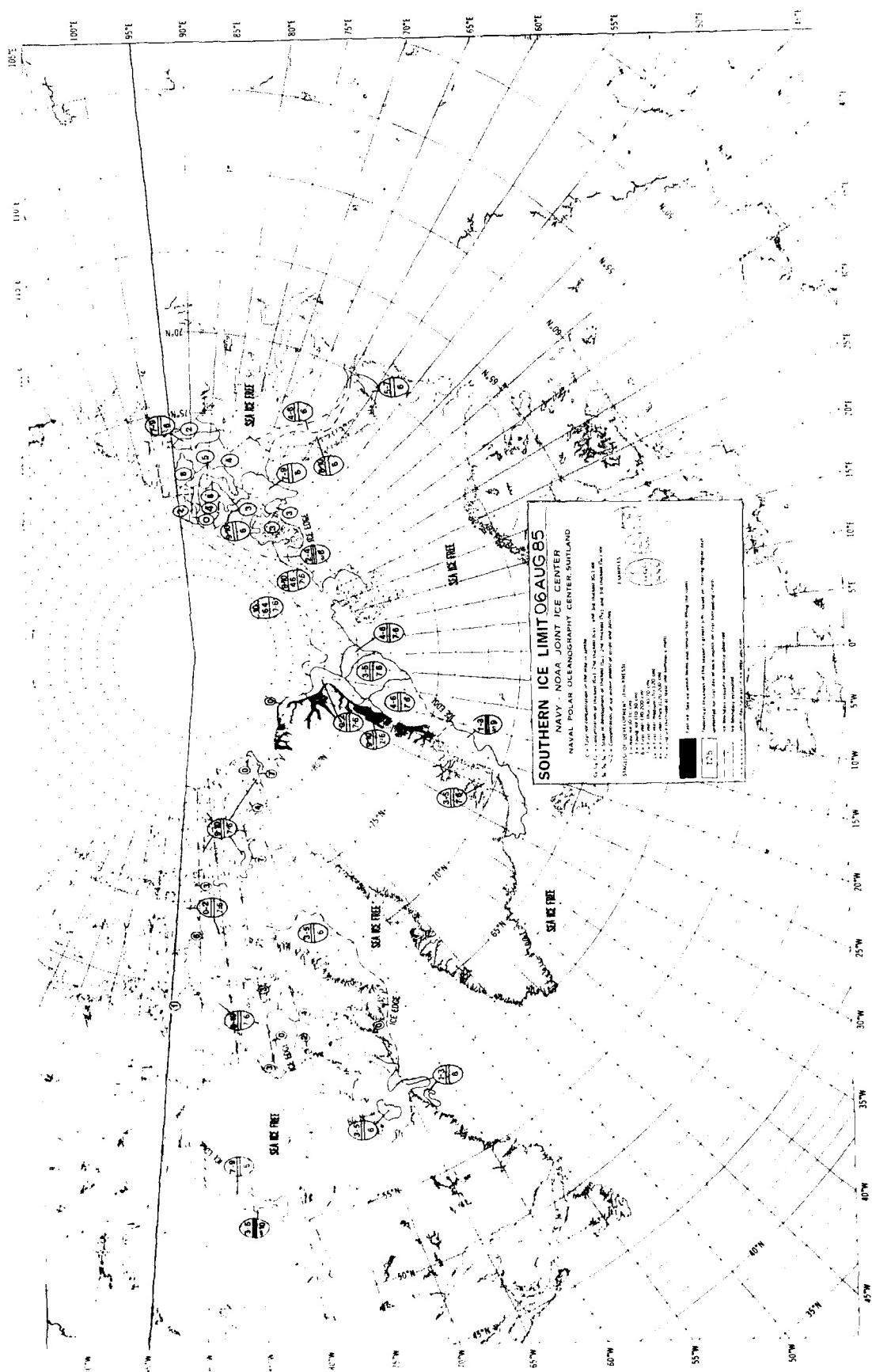








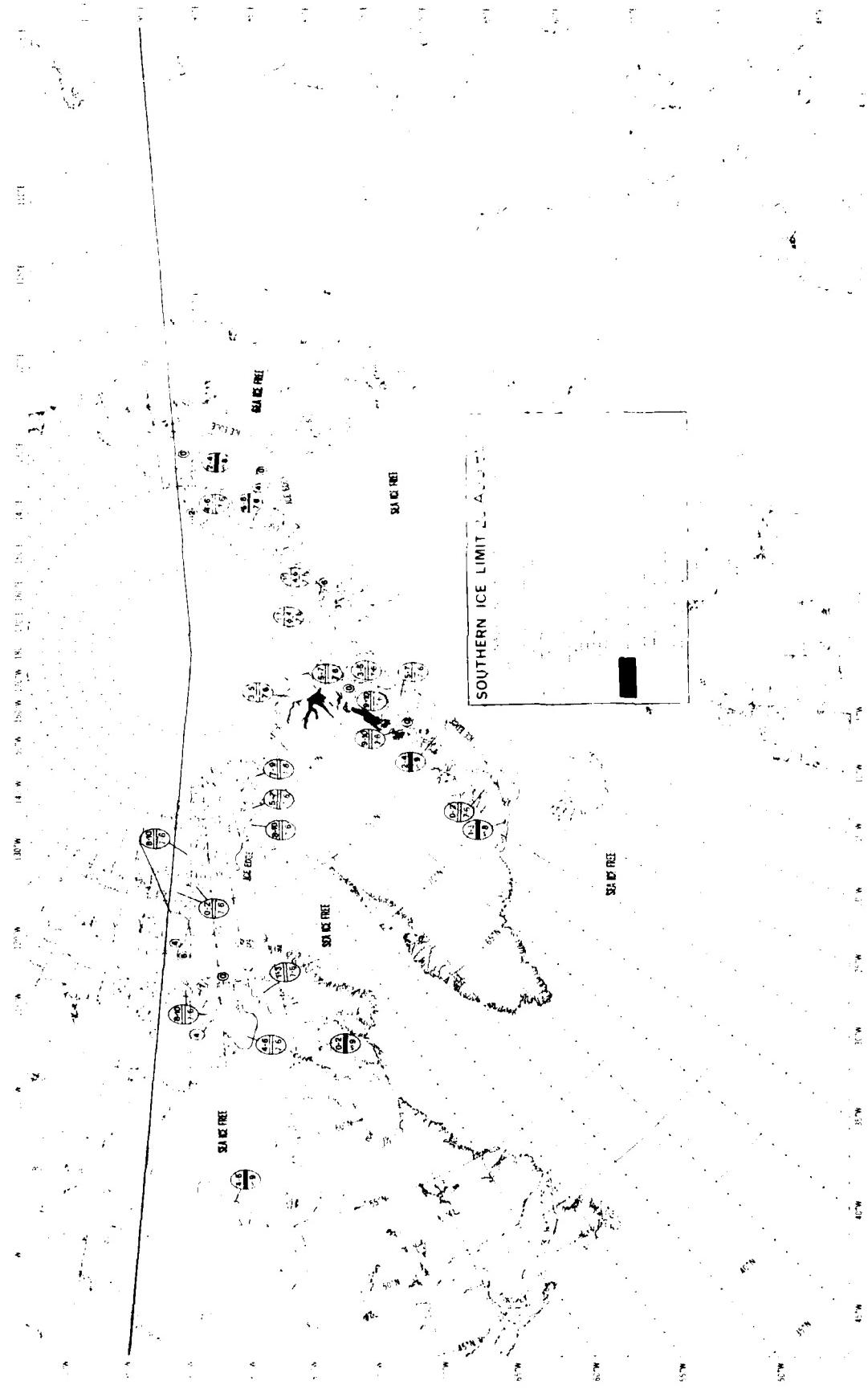


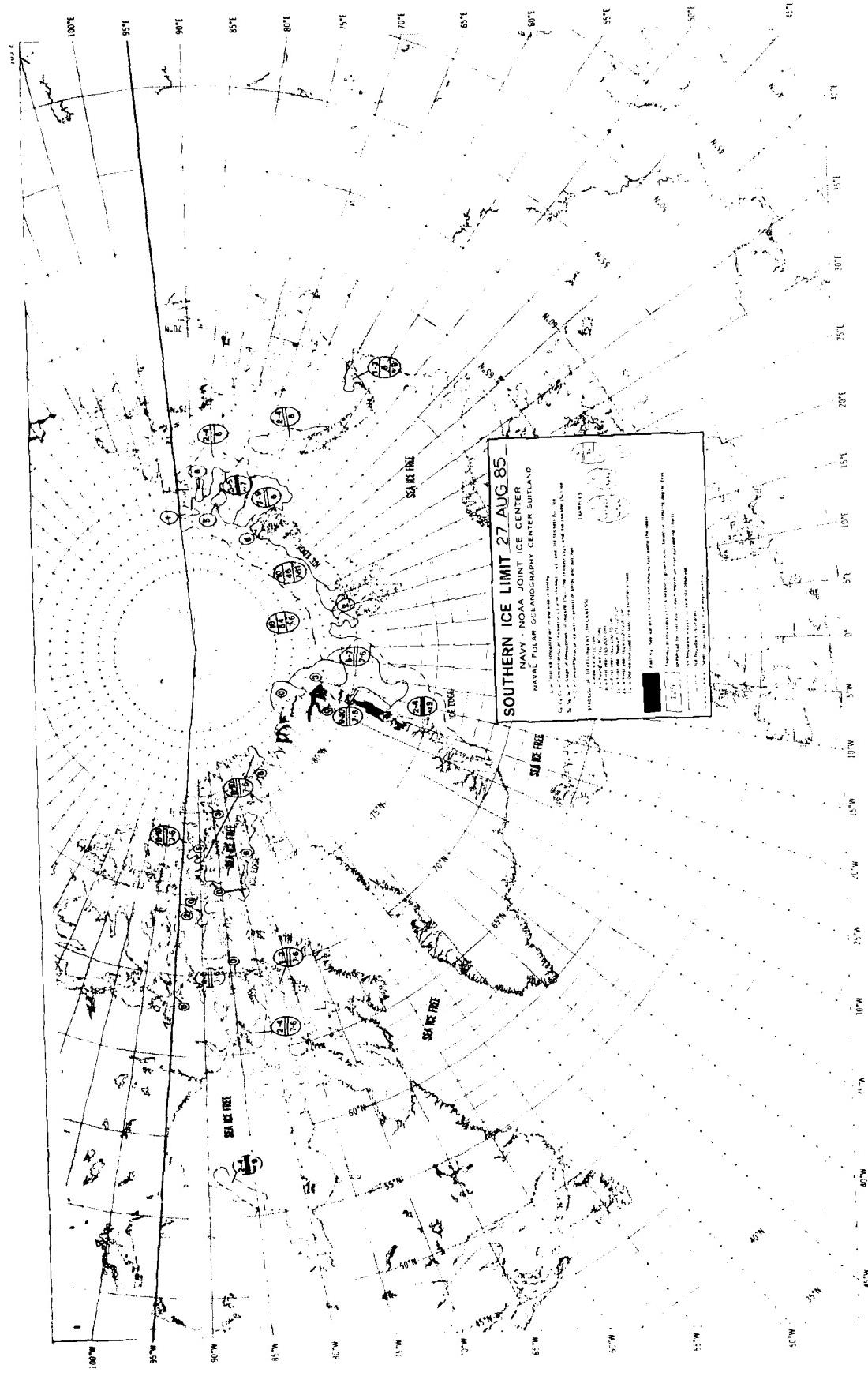


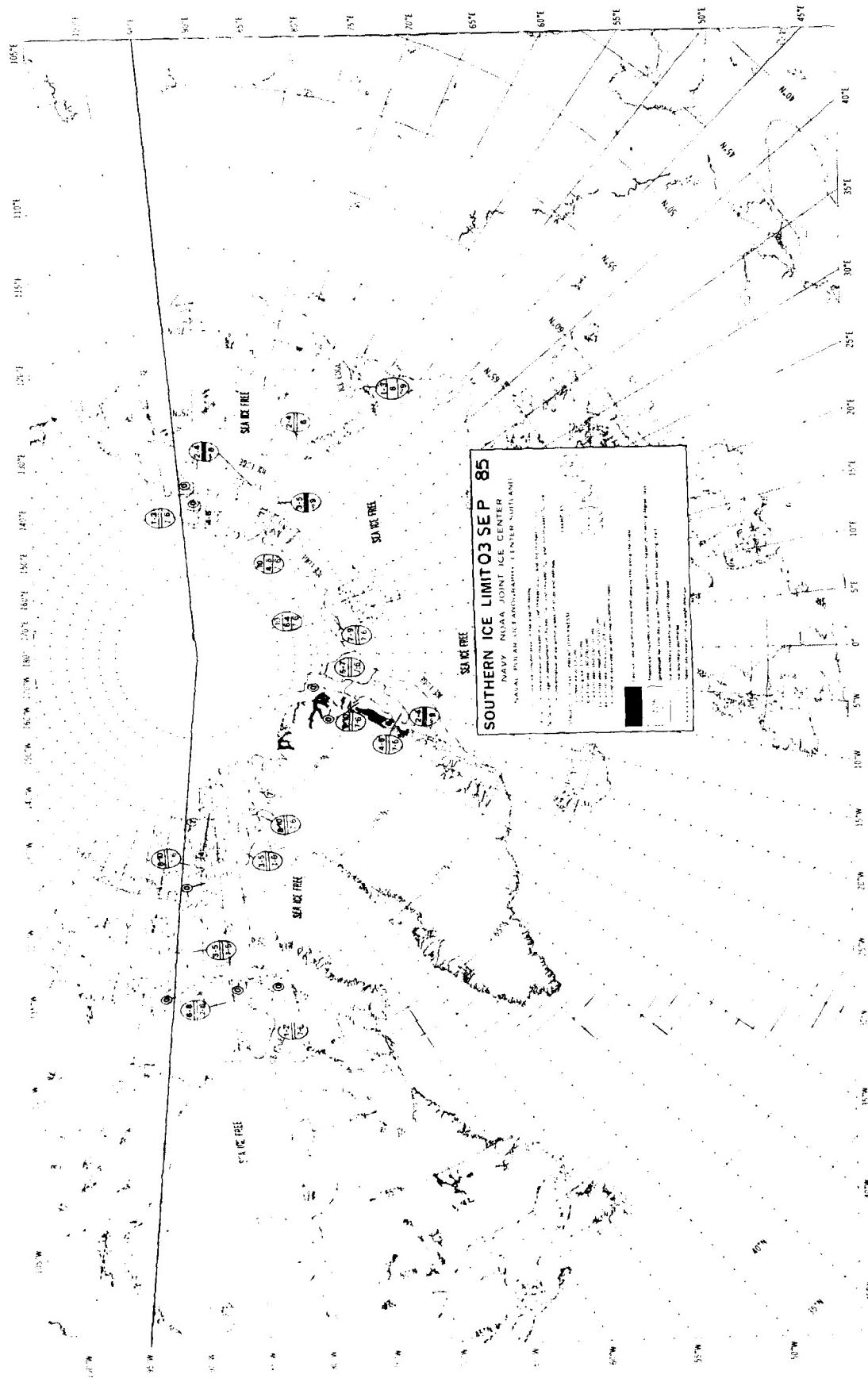
SOUTHERN ICE LIMIT 13 AUG 85

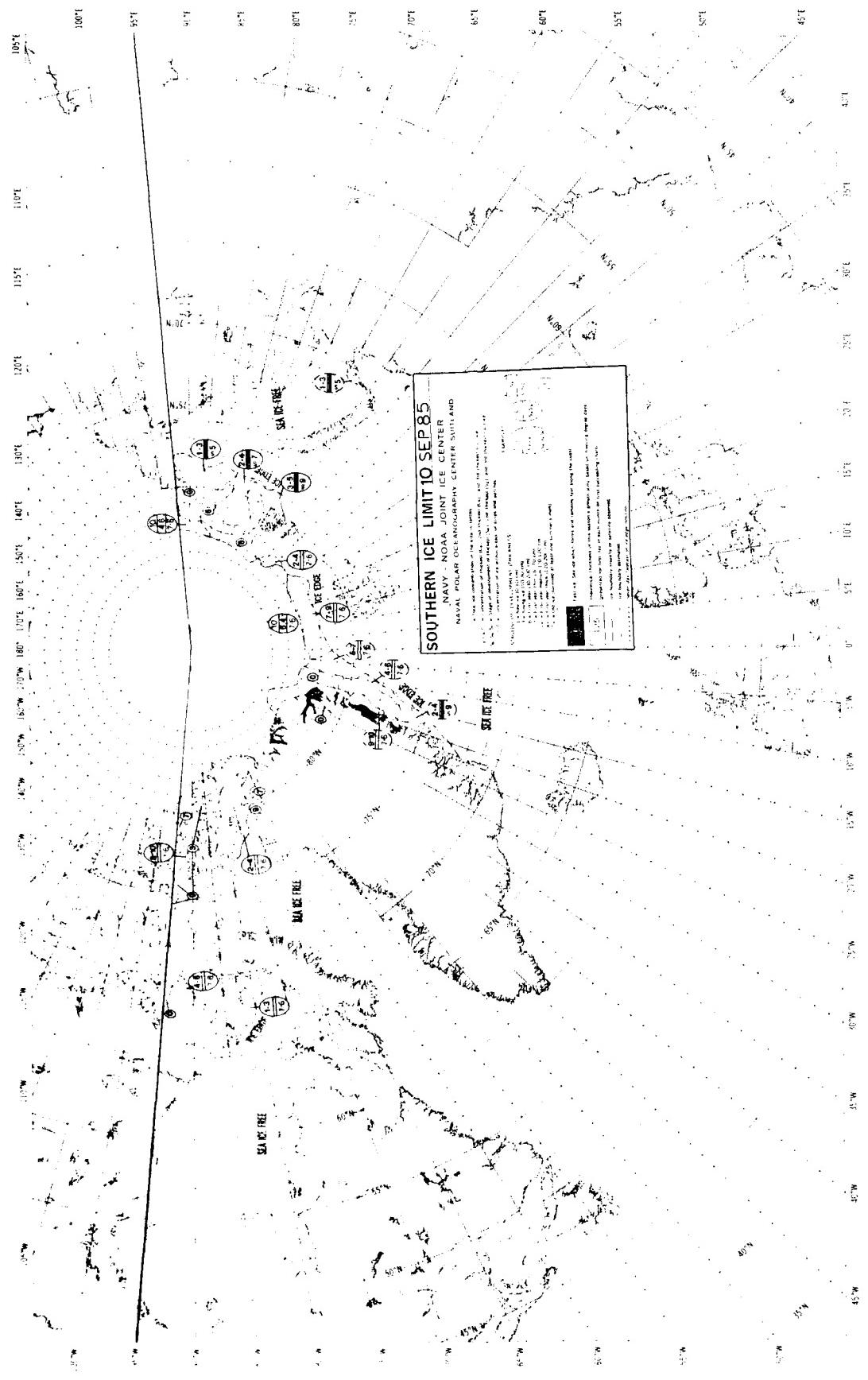
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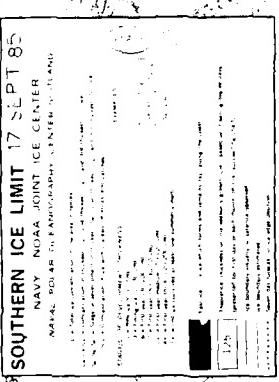
ICE LIMIT 13 AUG 85
This map shows the southern limit of sea ice as observed by satellite imagery on 13 August 1985. The limit is defined as the outermost edge of the pack ice, where the concentration is at least 15%.
The map includes latitude and longitude coordinates, and labels for landmasses and features.
Source: Satellite imagery from the Naval Polar Oceanographic Laboratory.

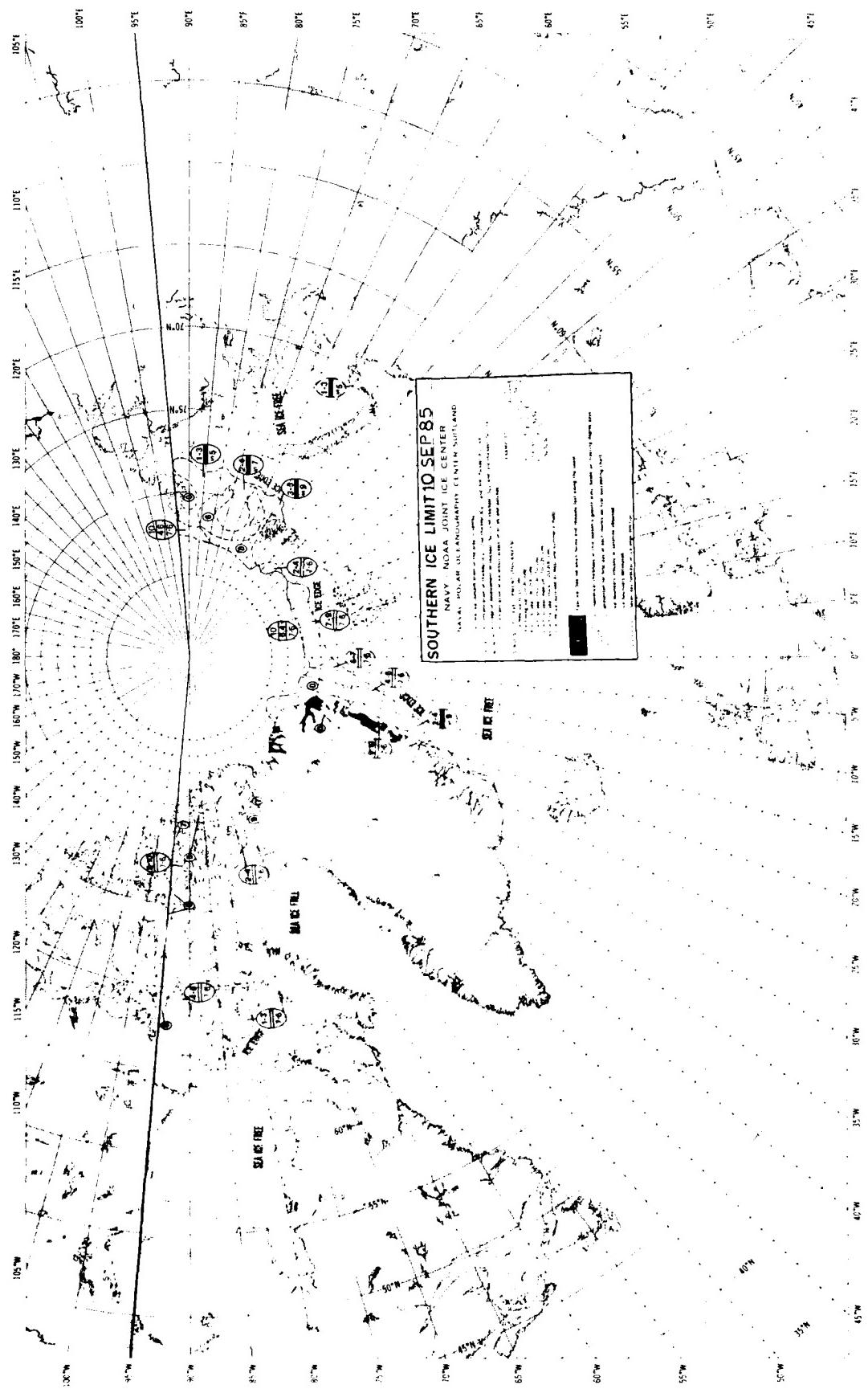


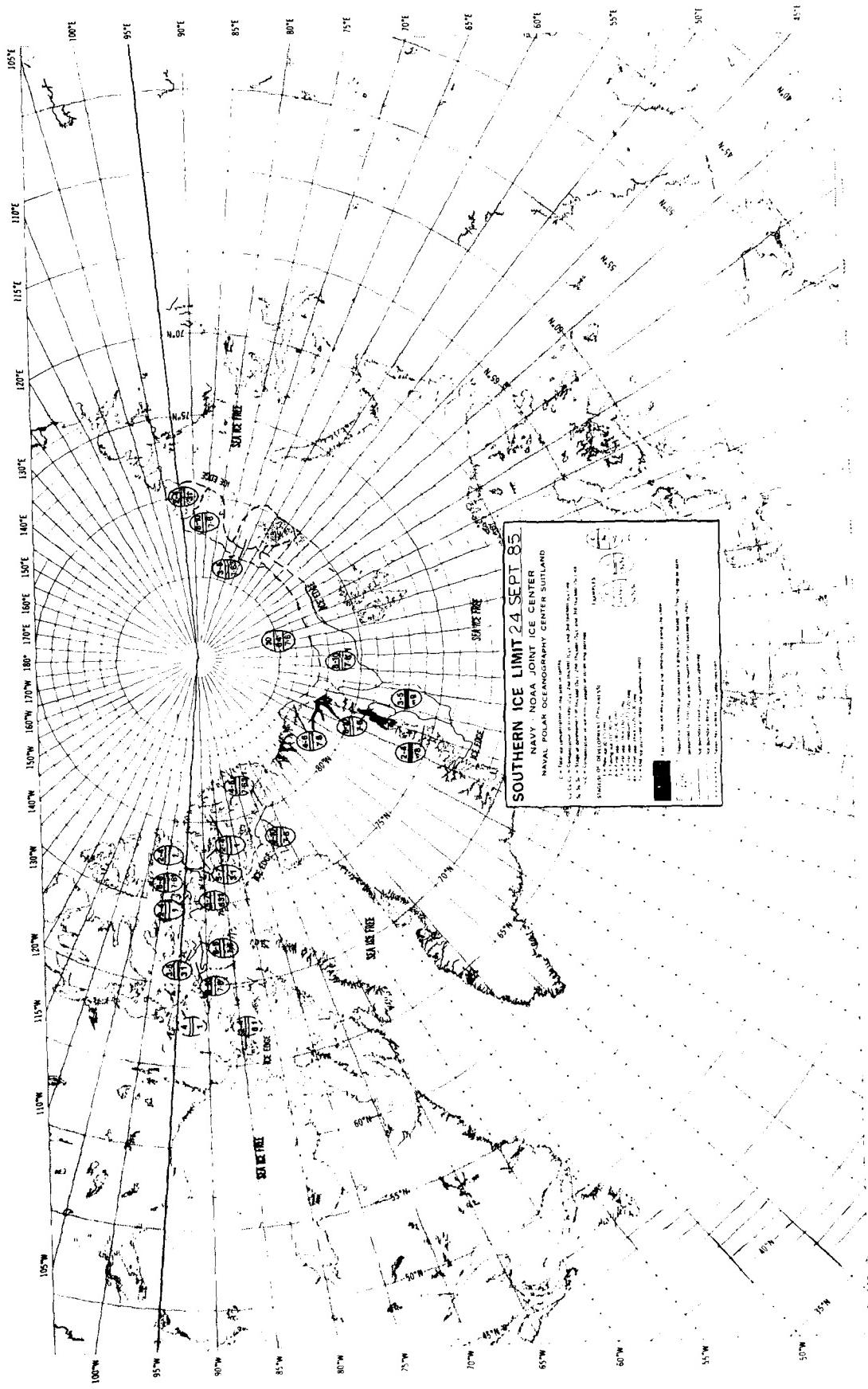


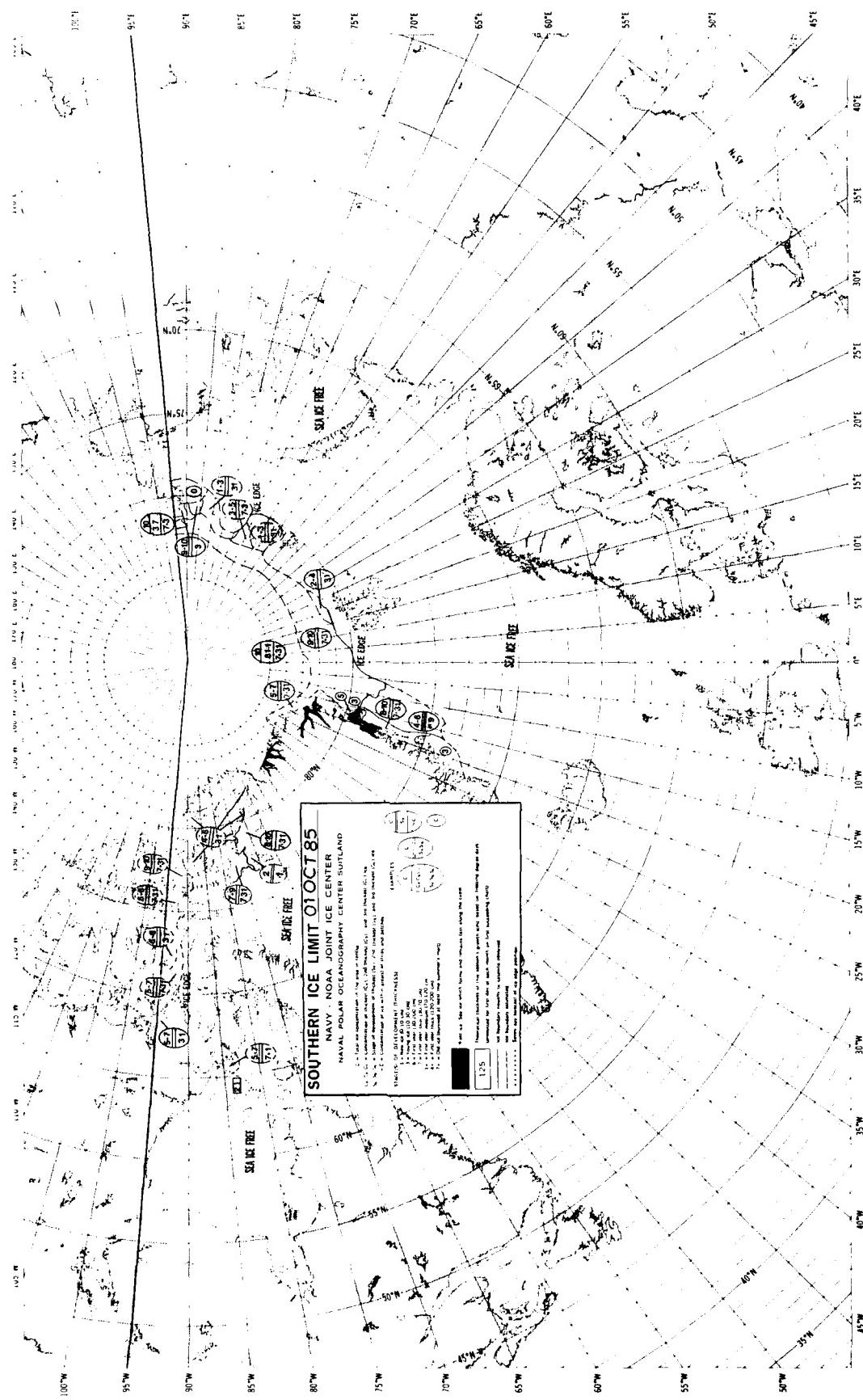


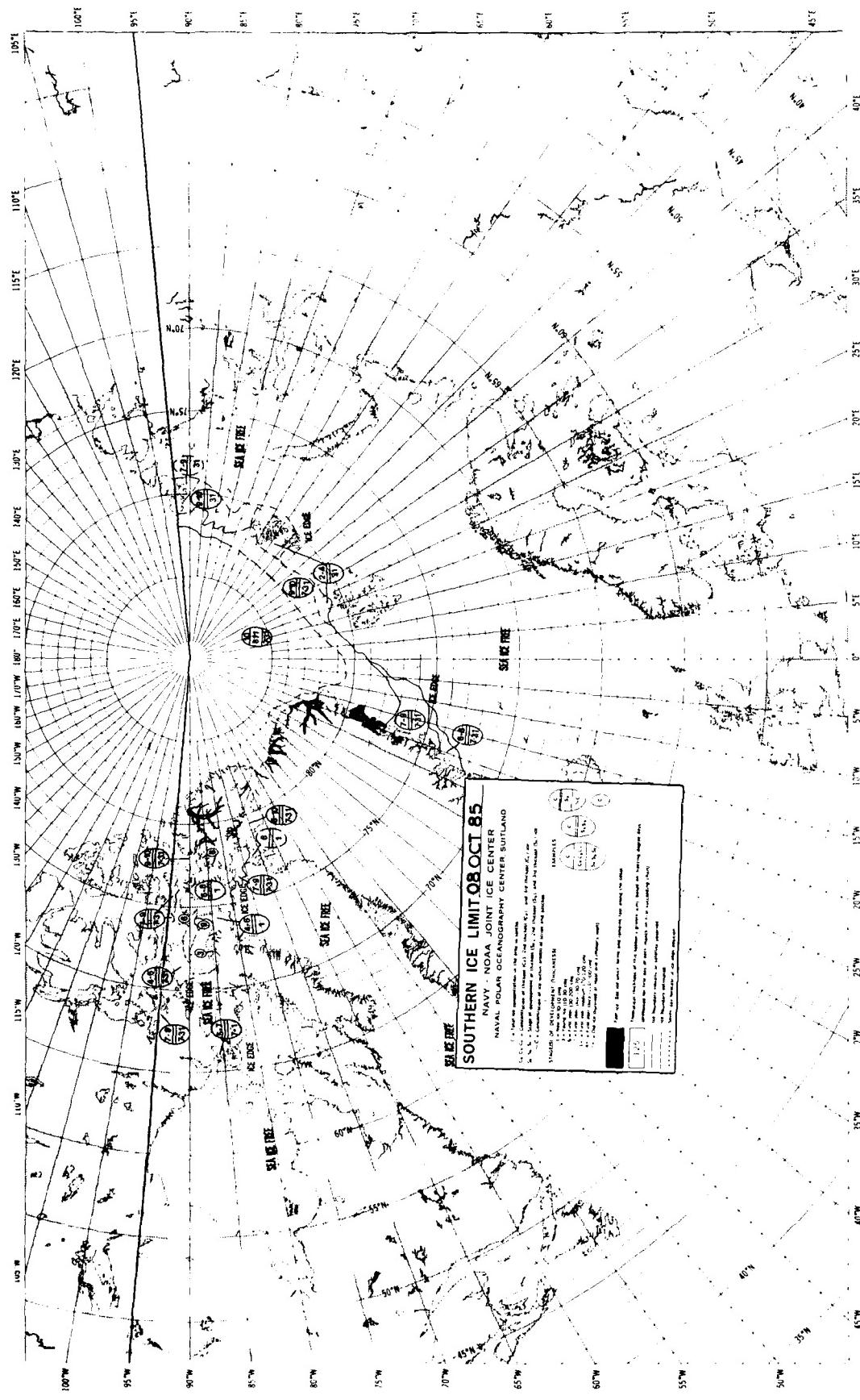


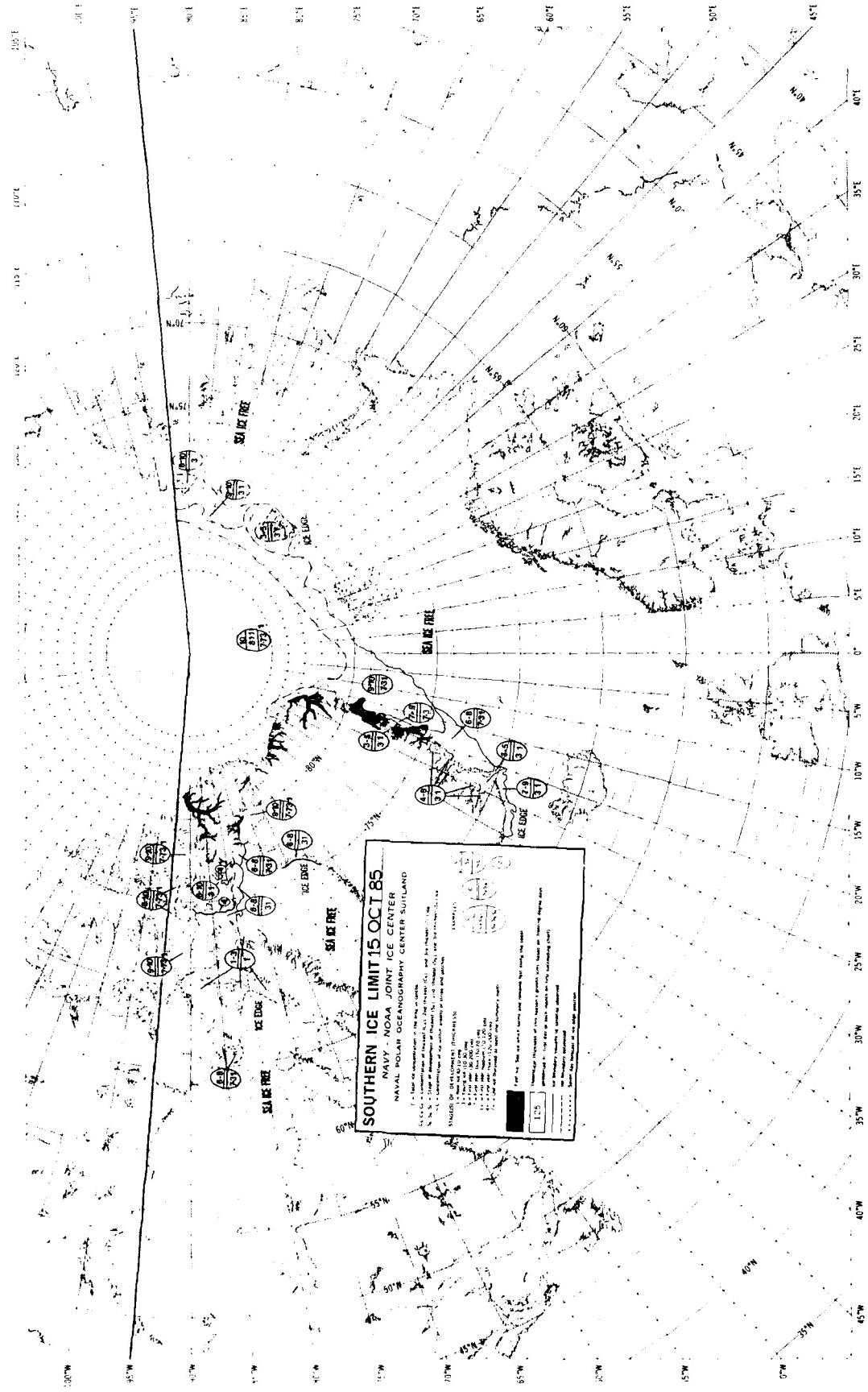


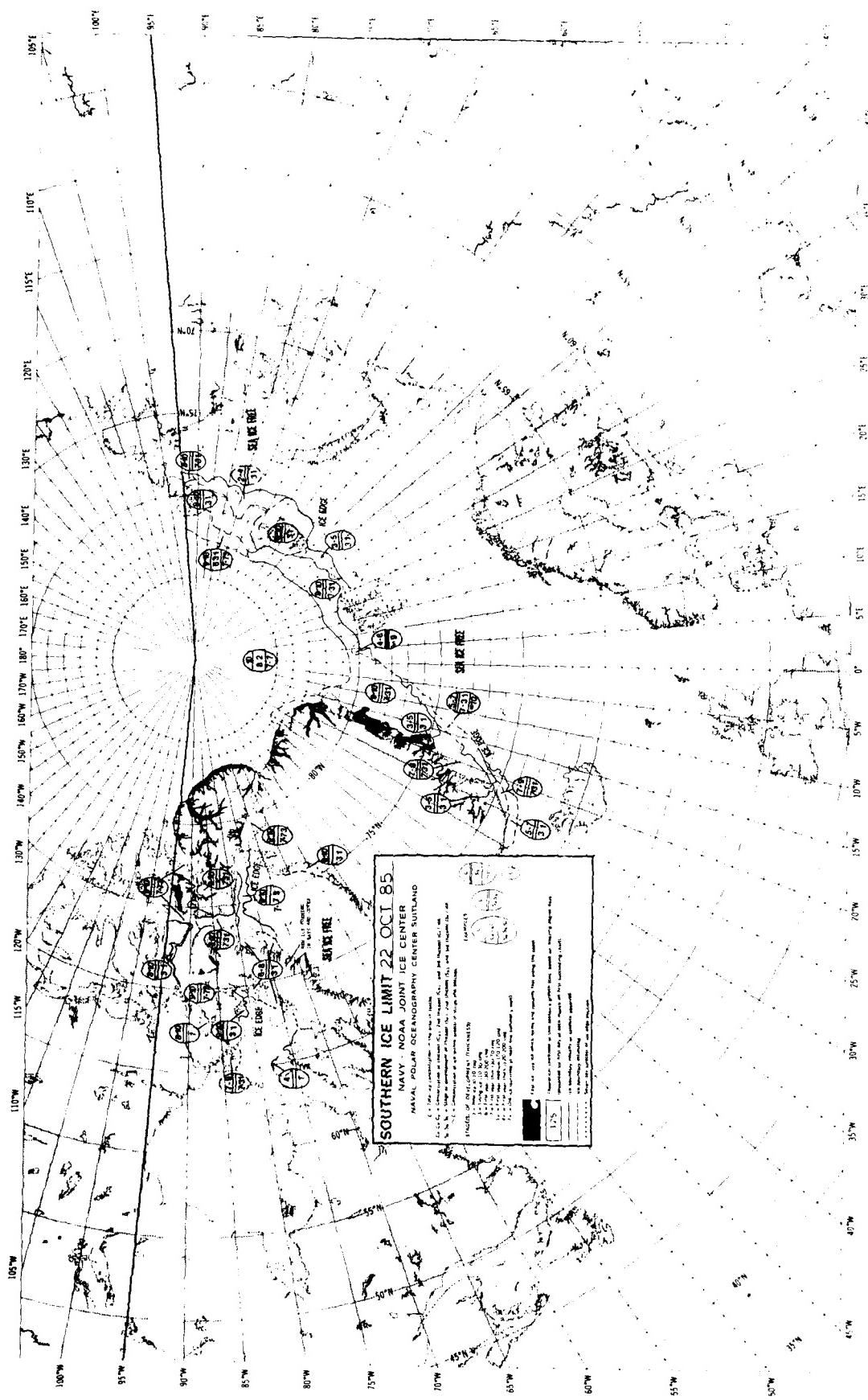


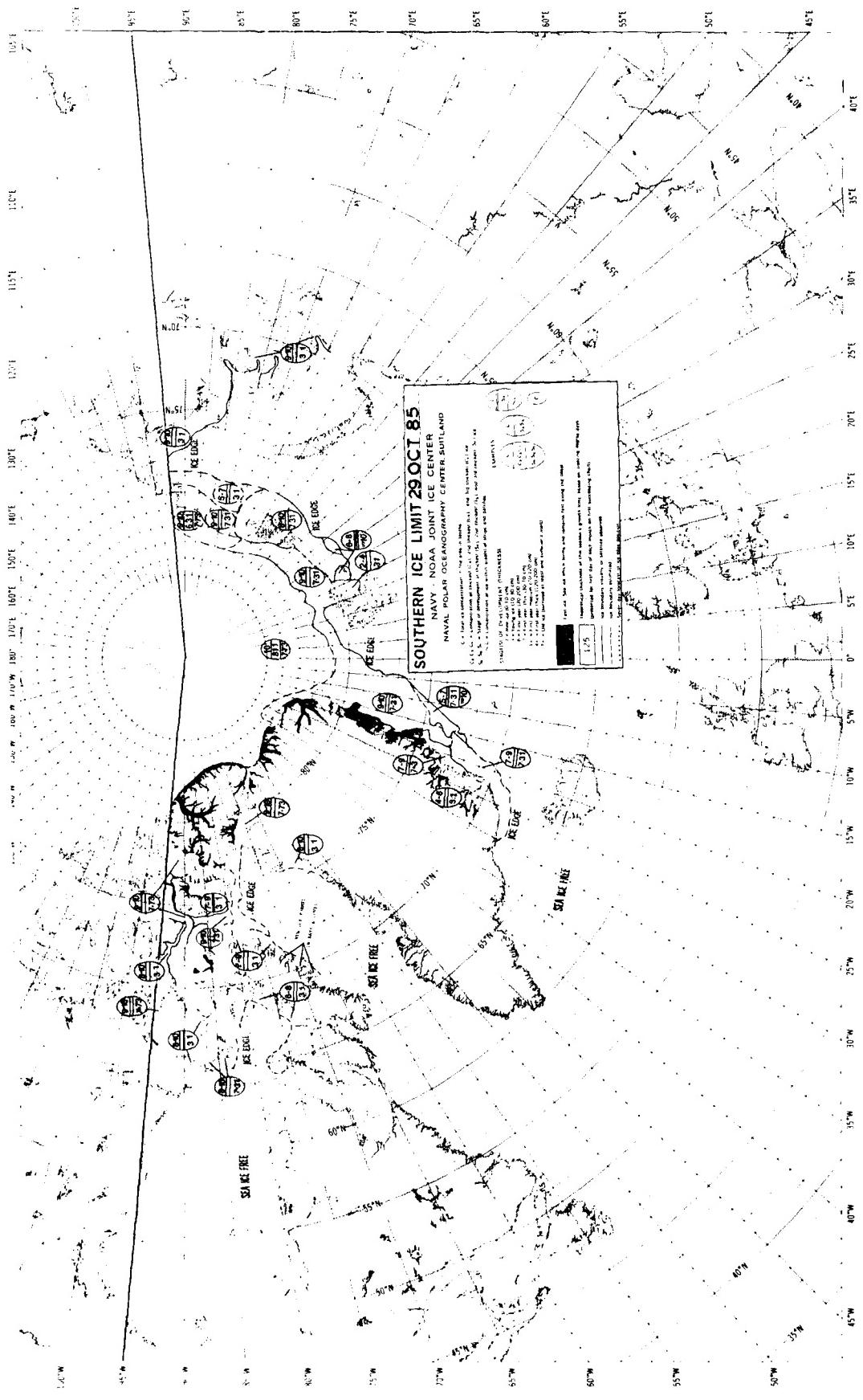


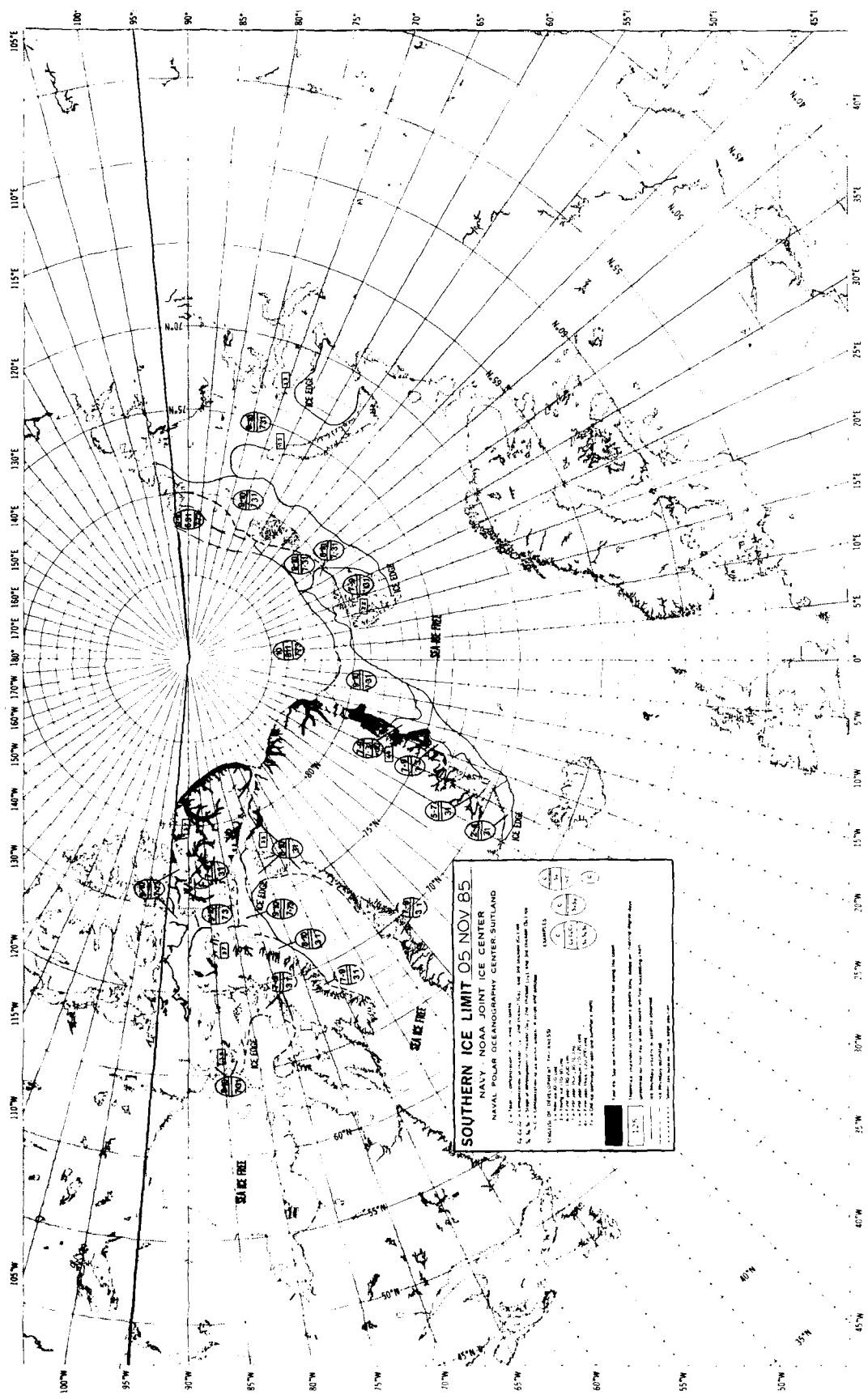


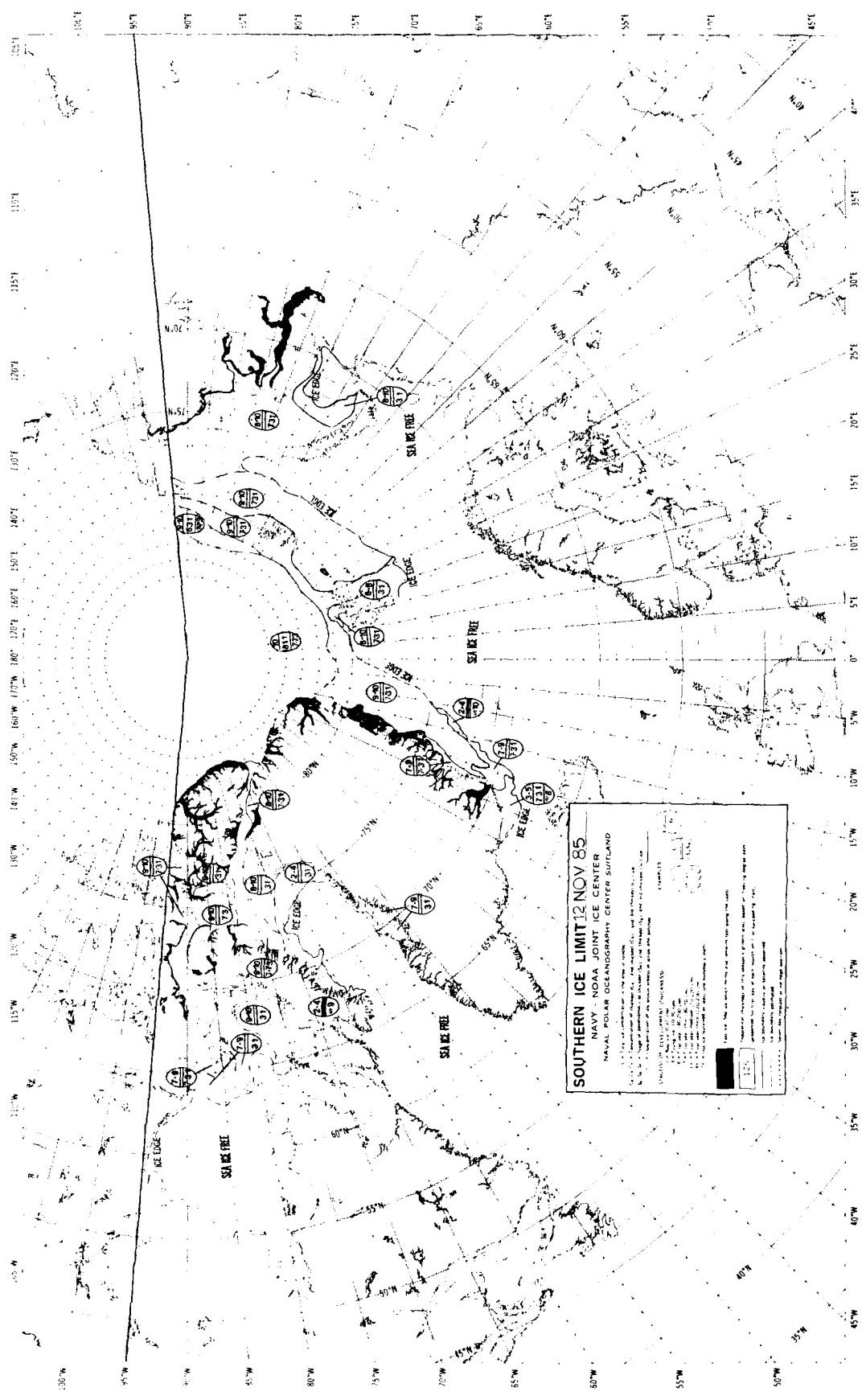


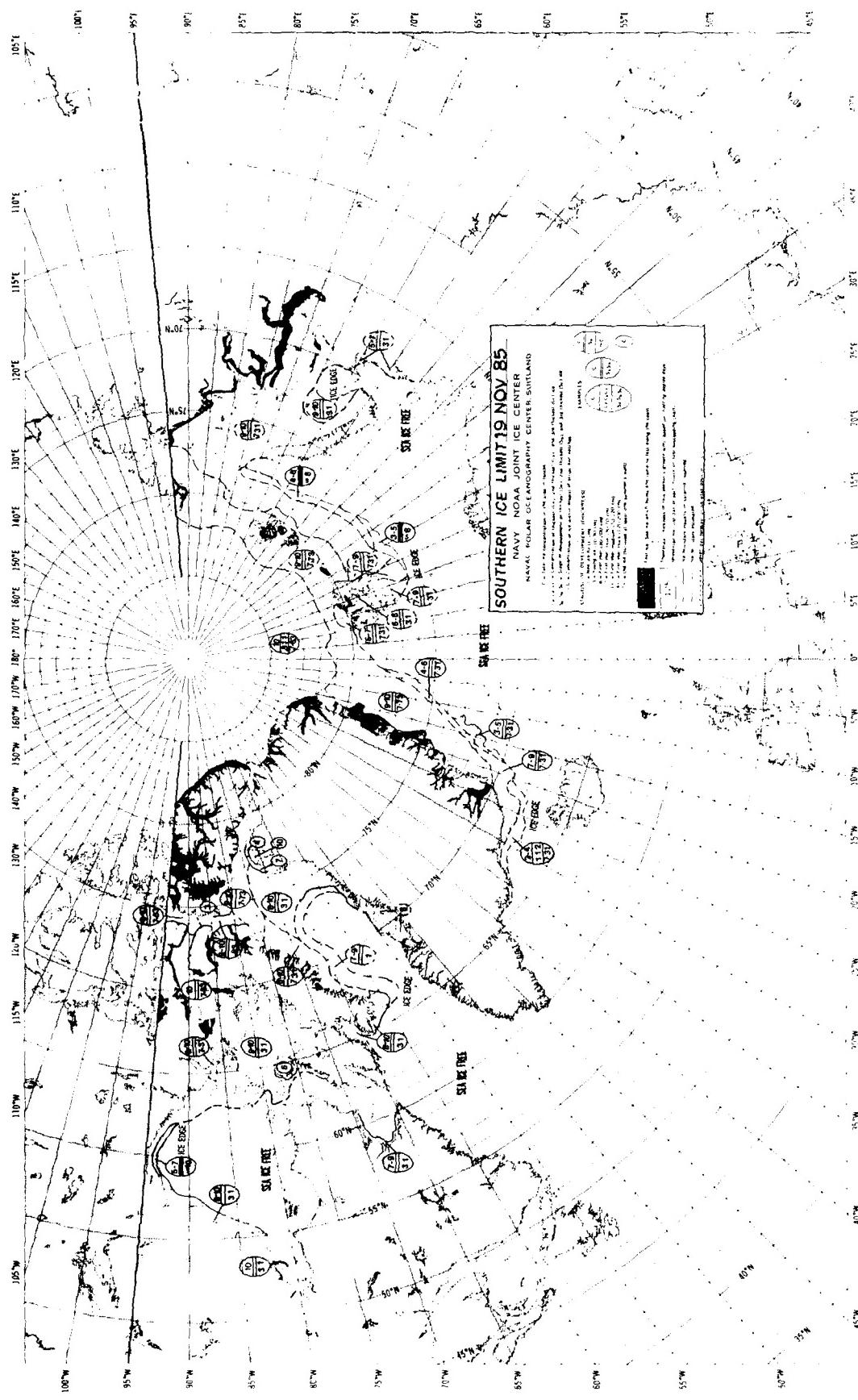


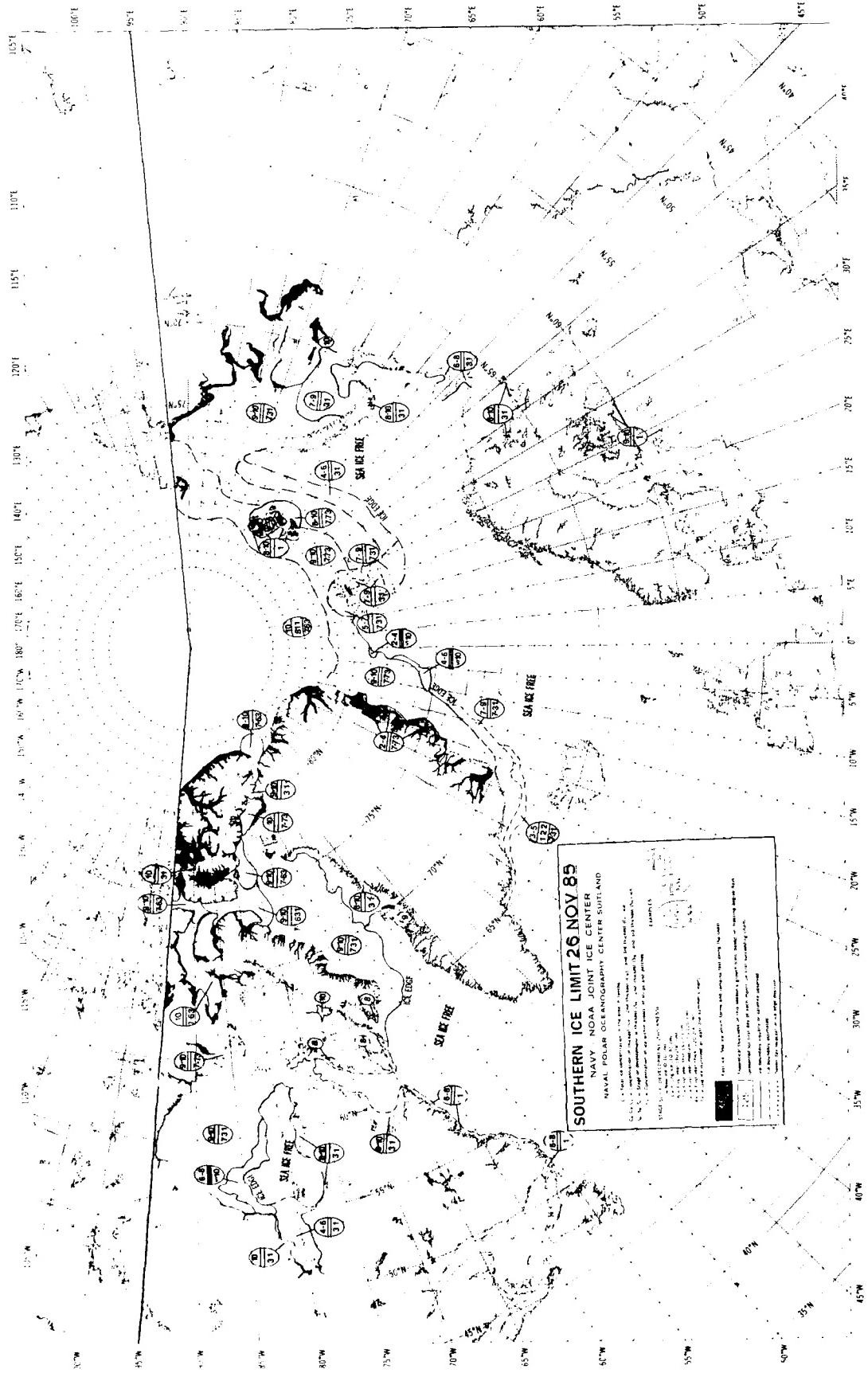


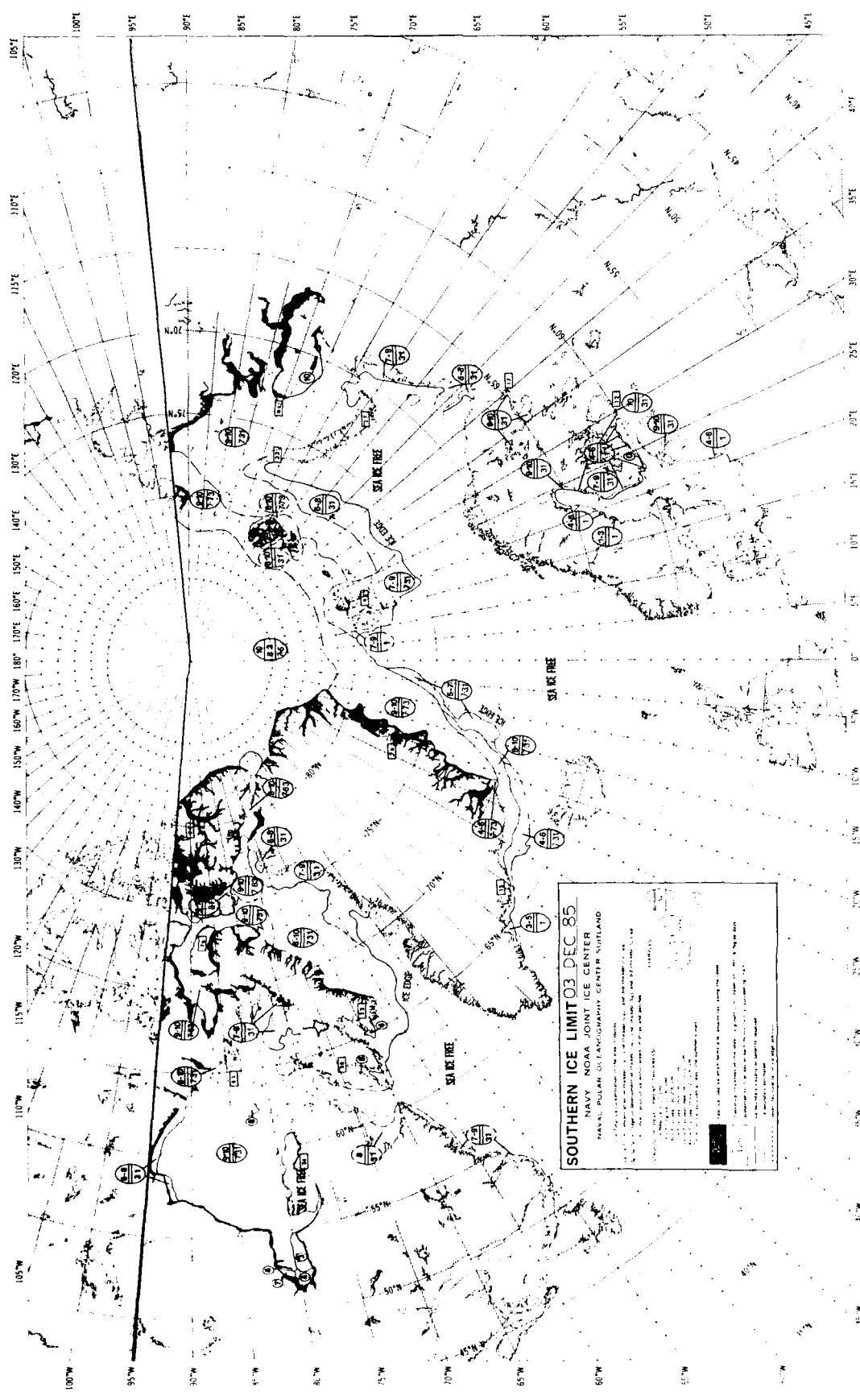


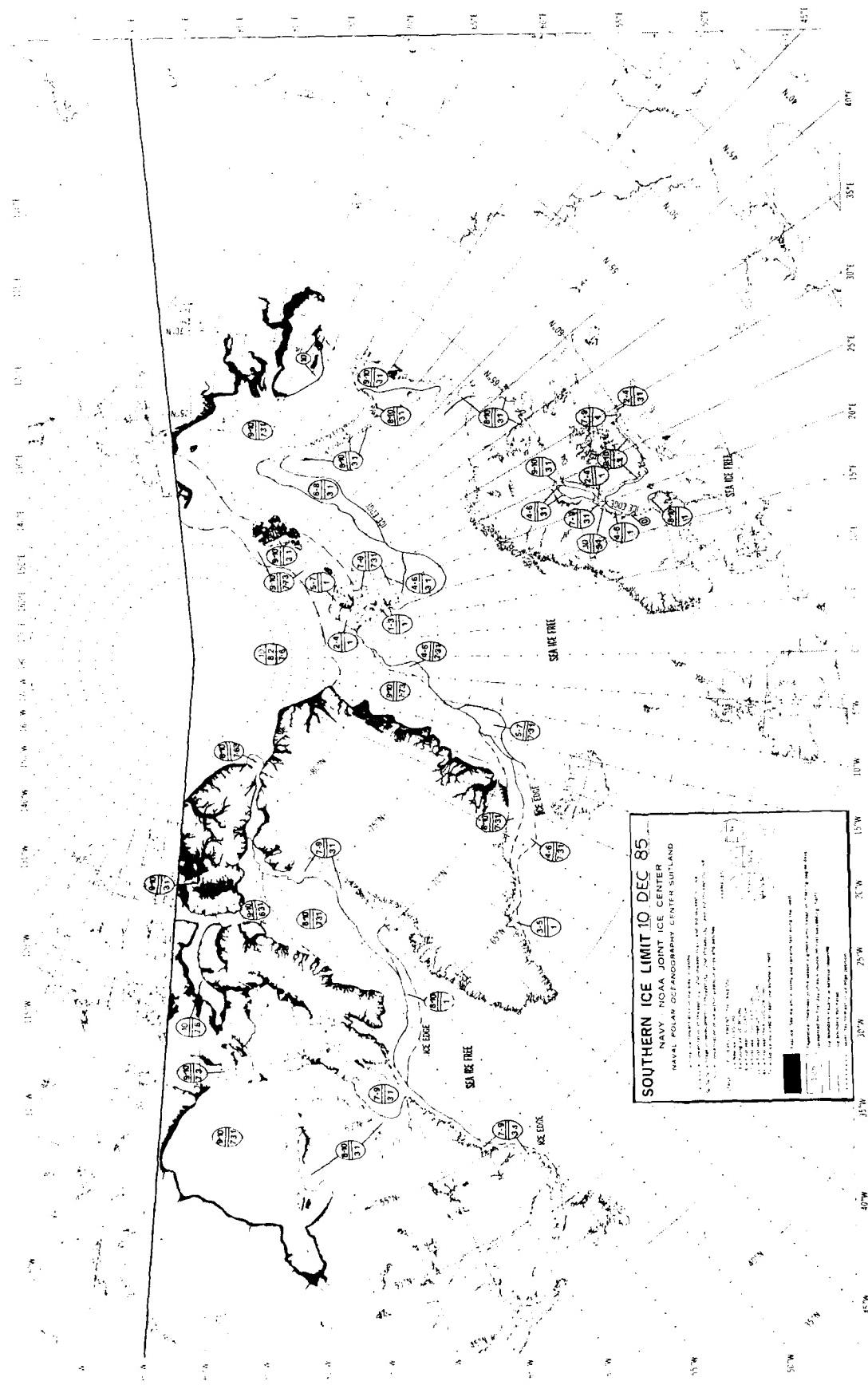


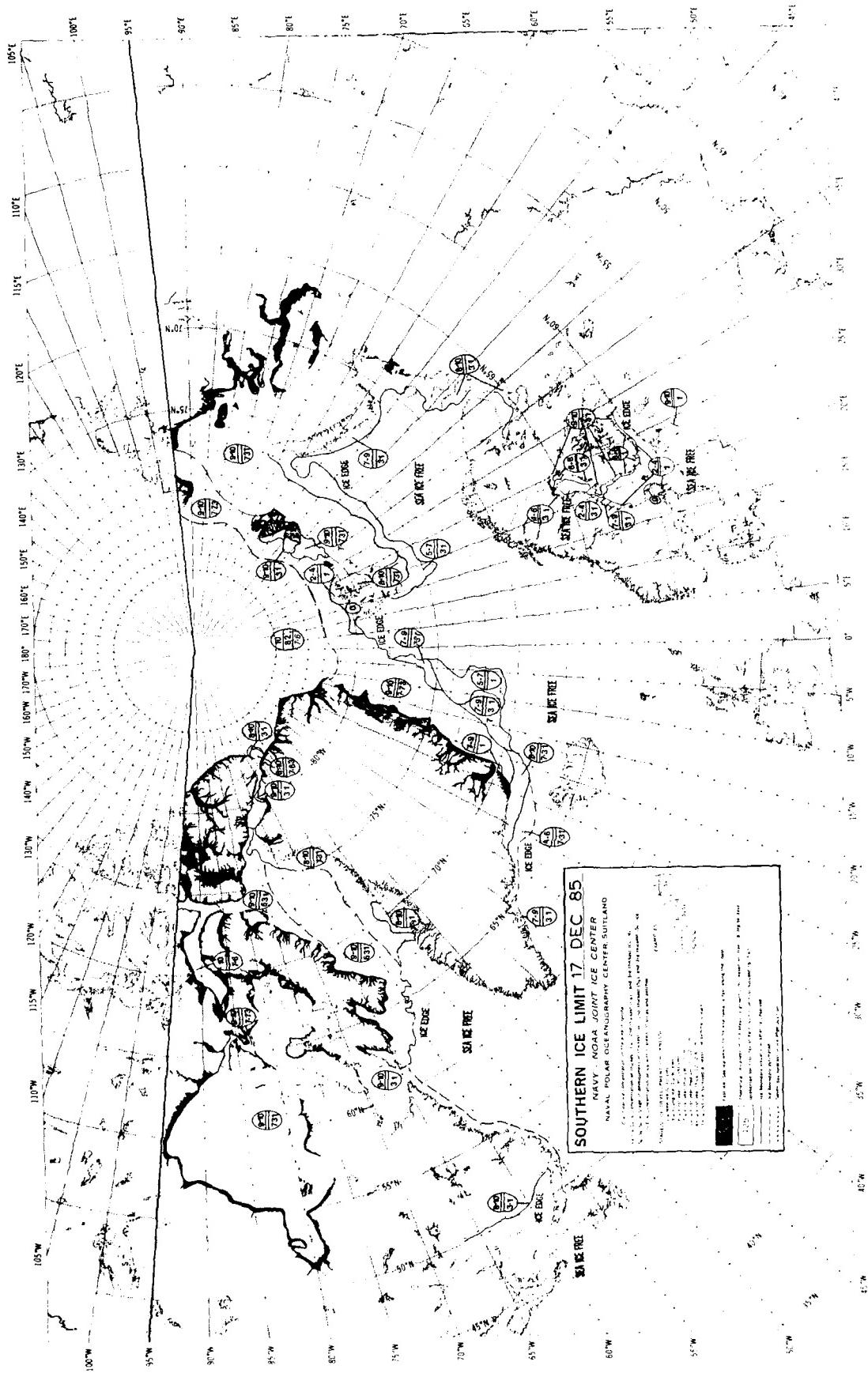


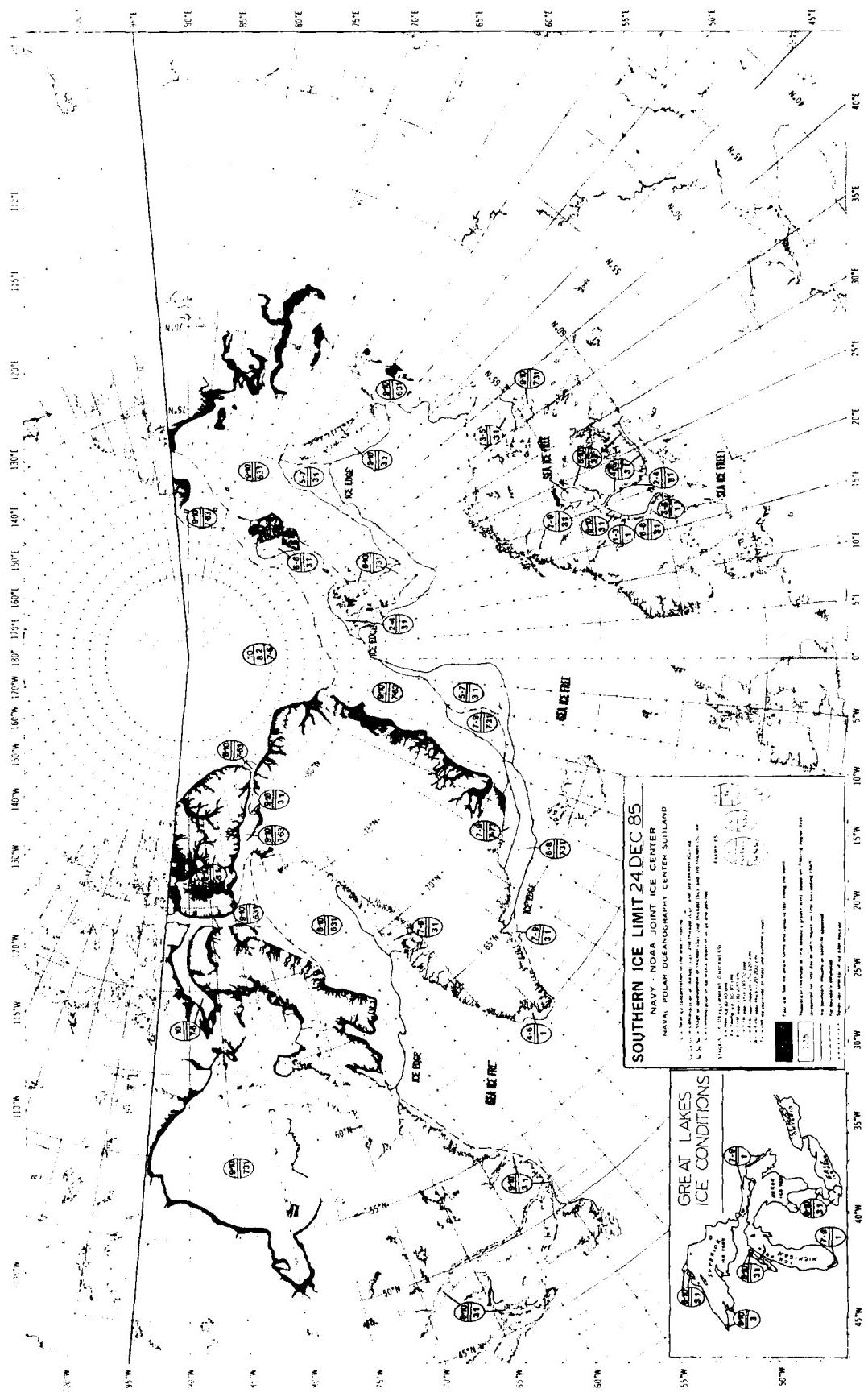


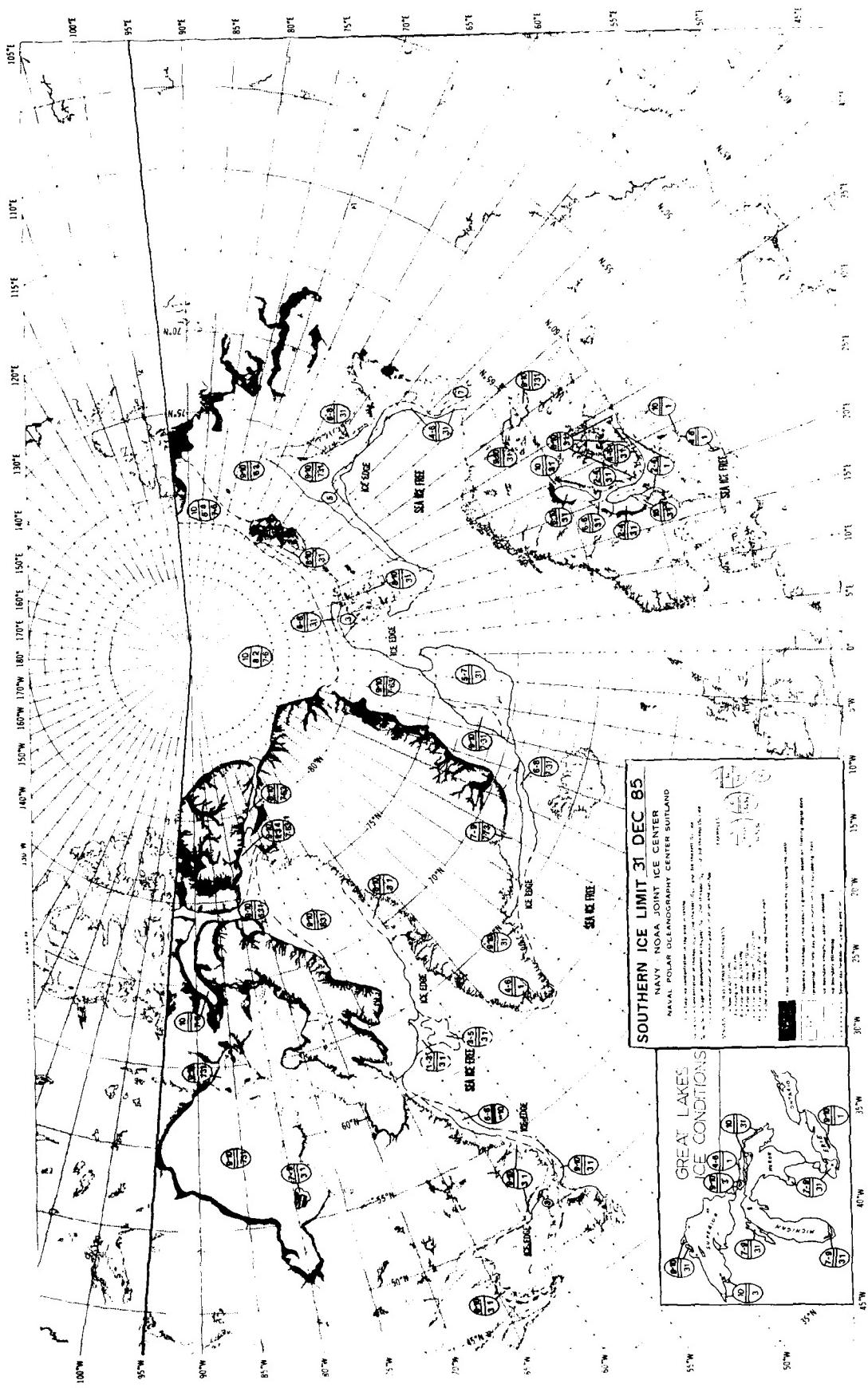


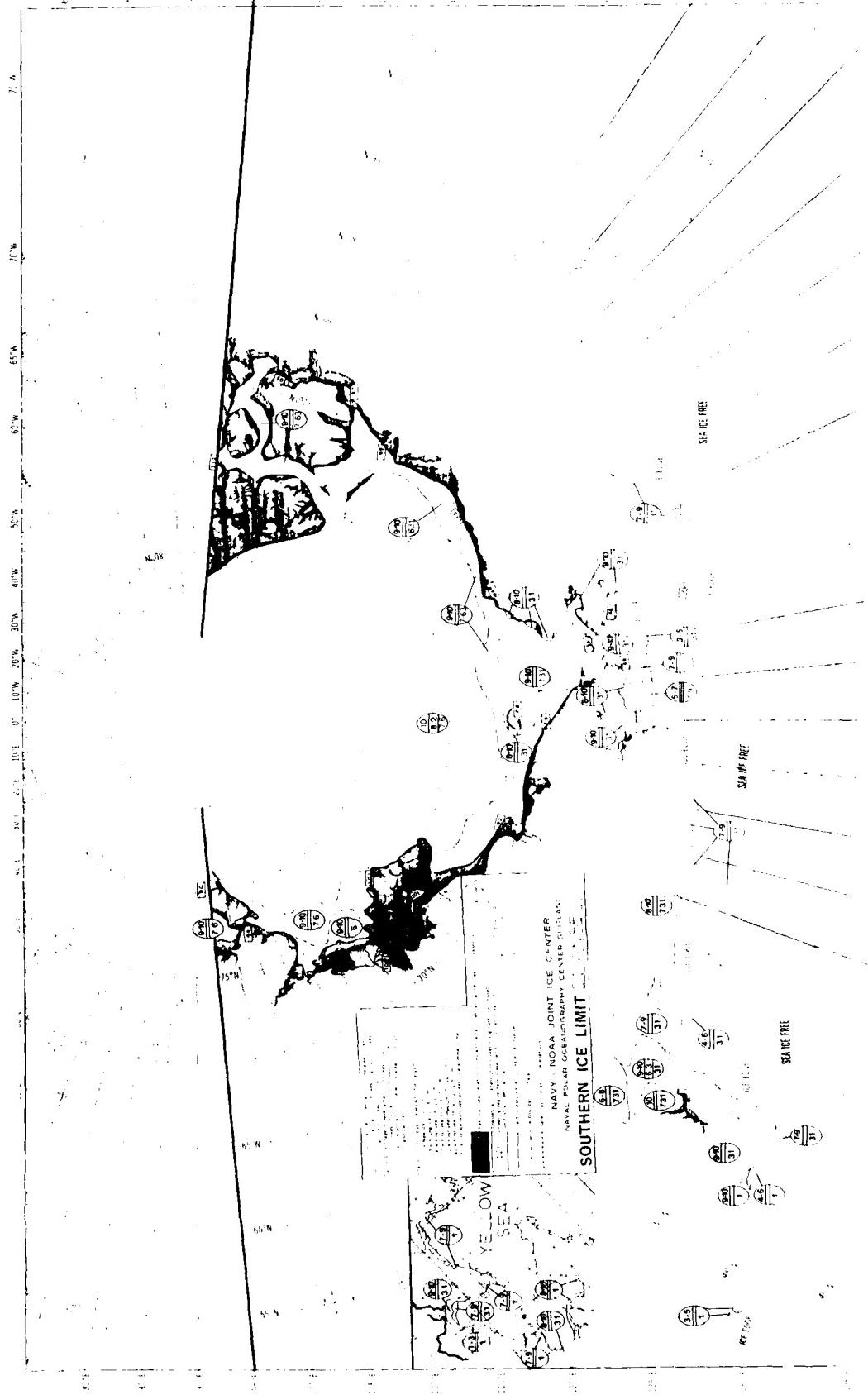


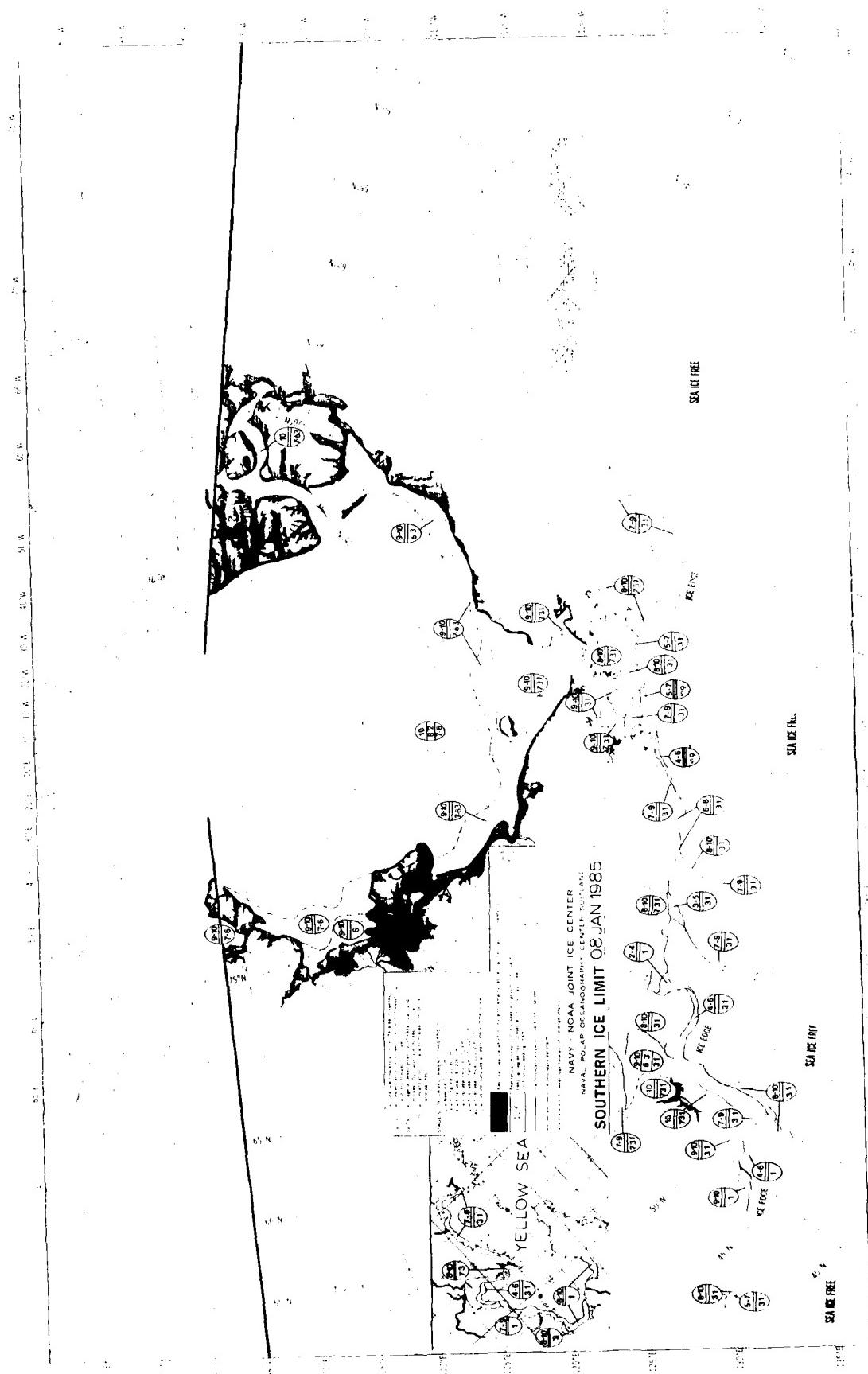


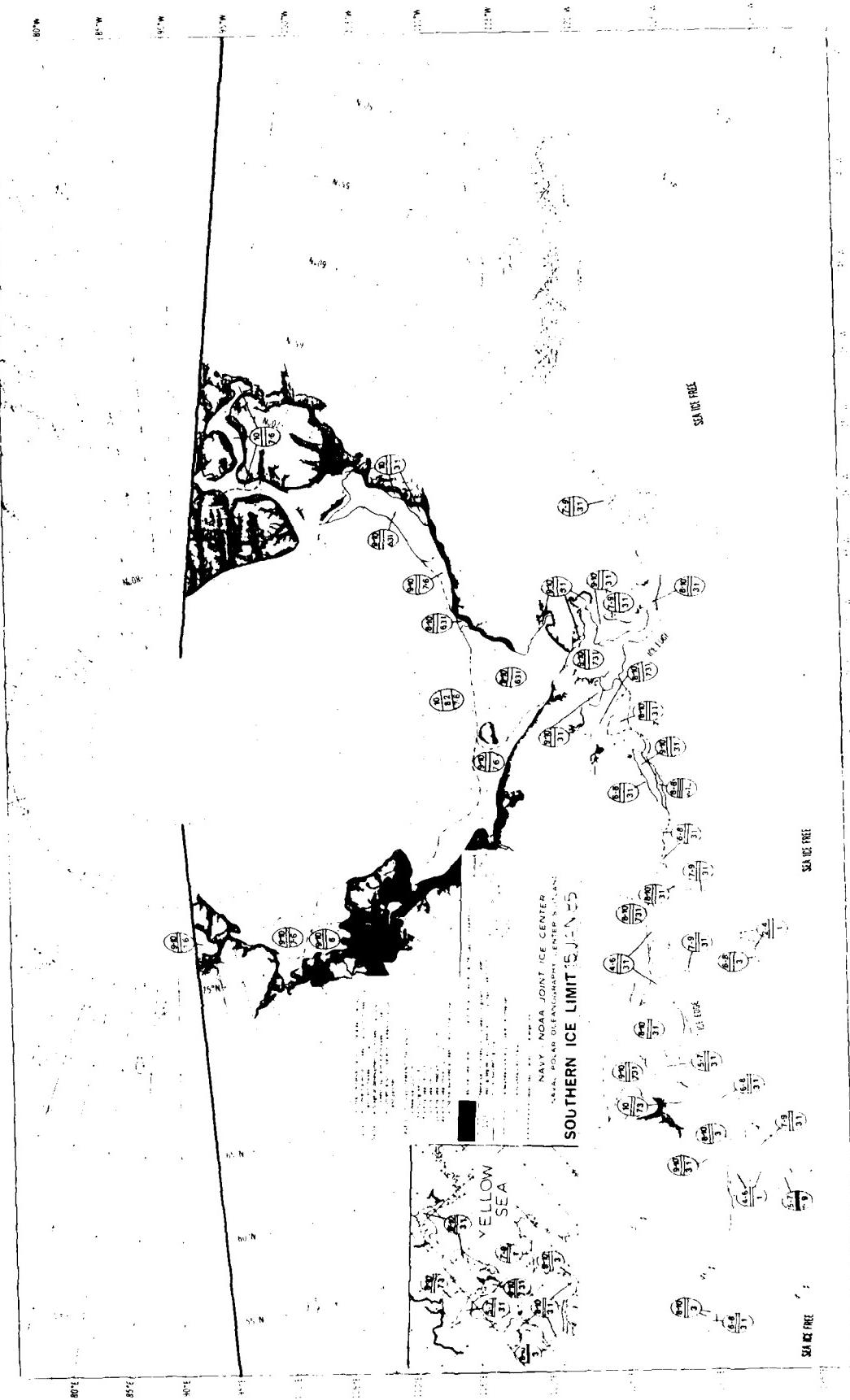












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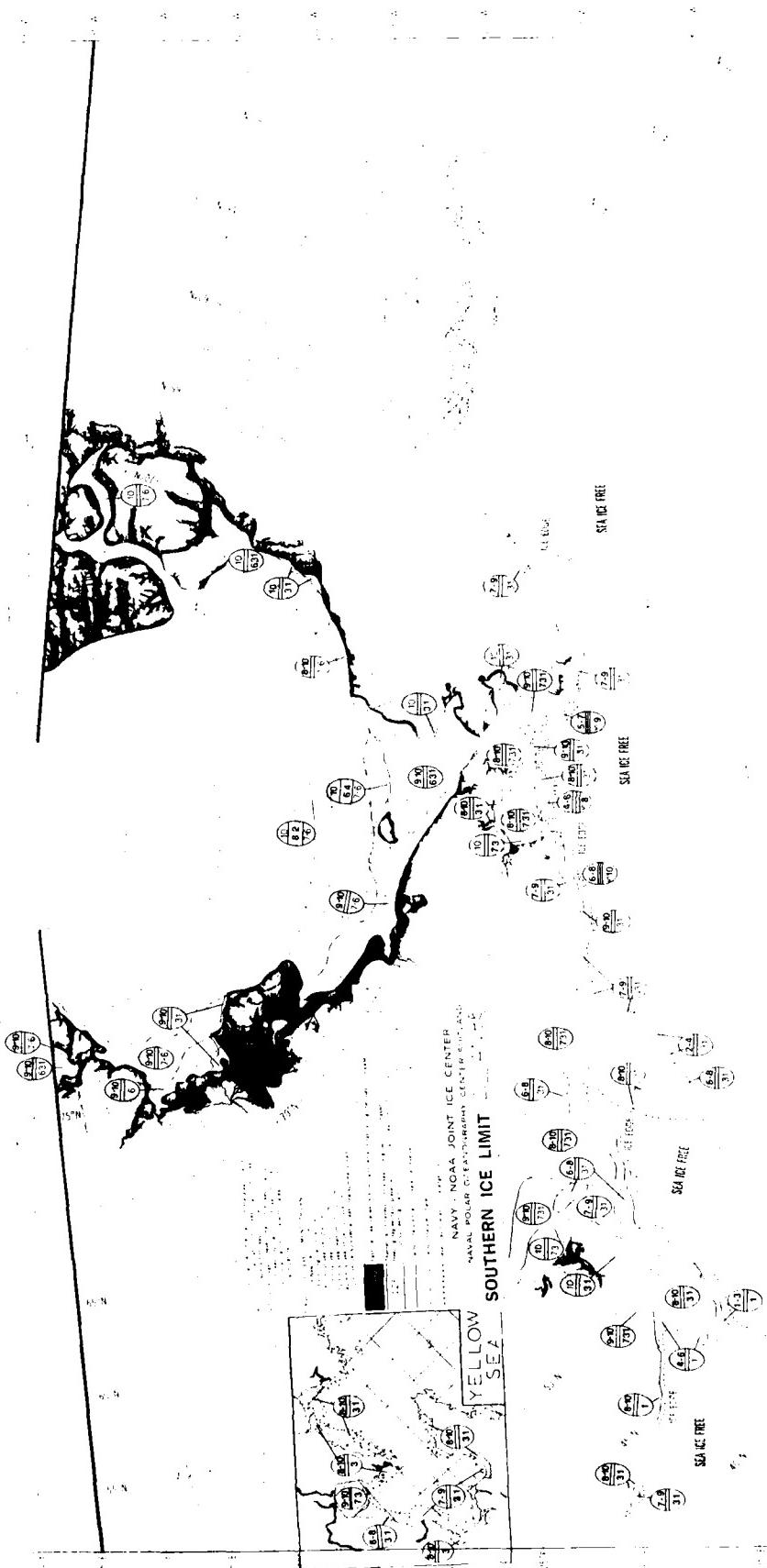
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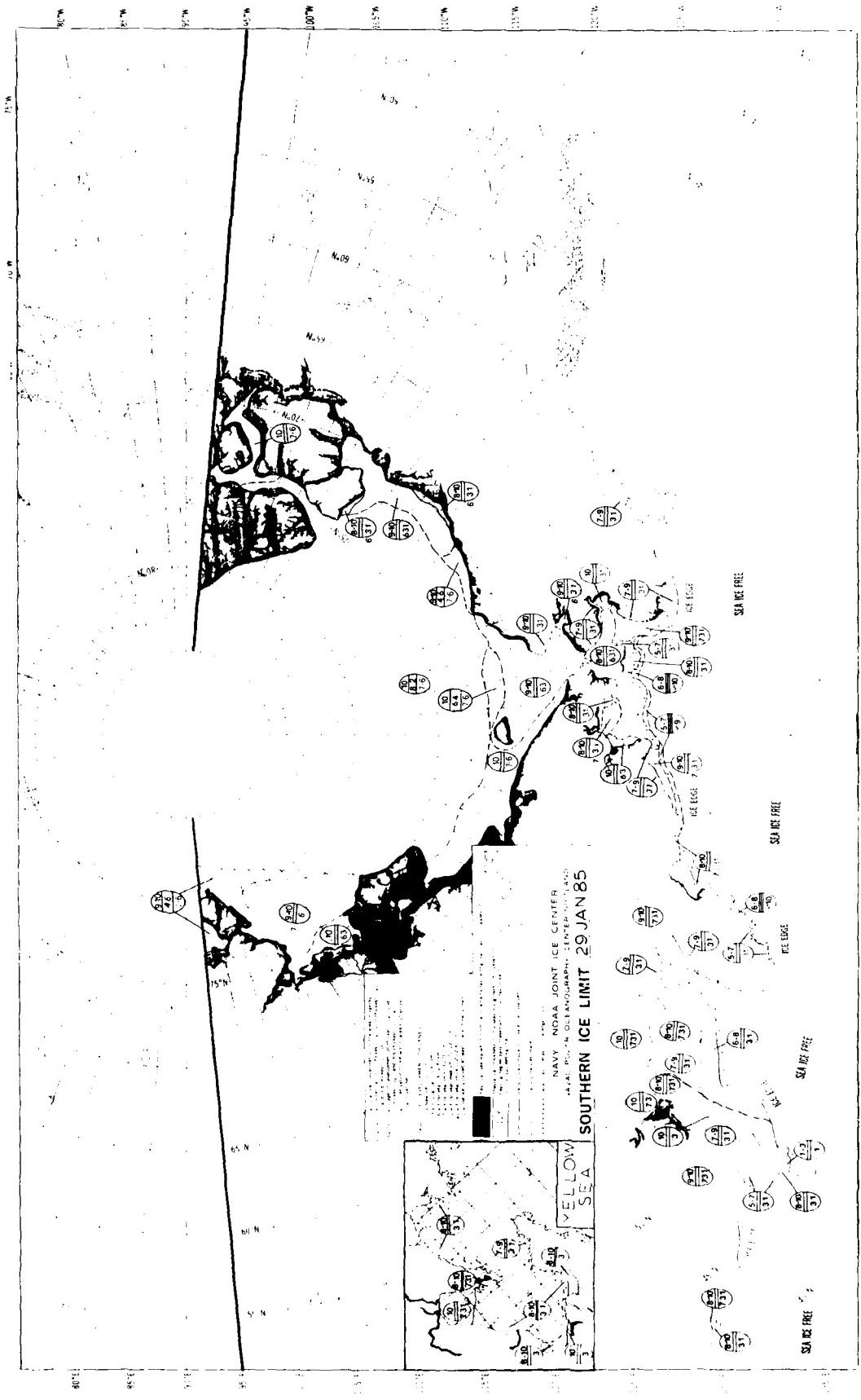
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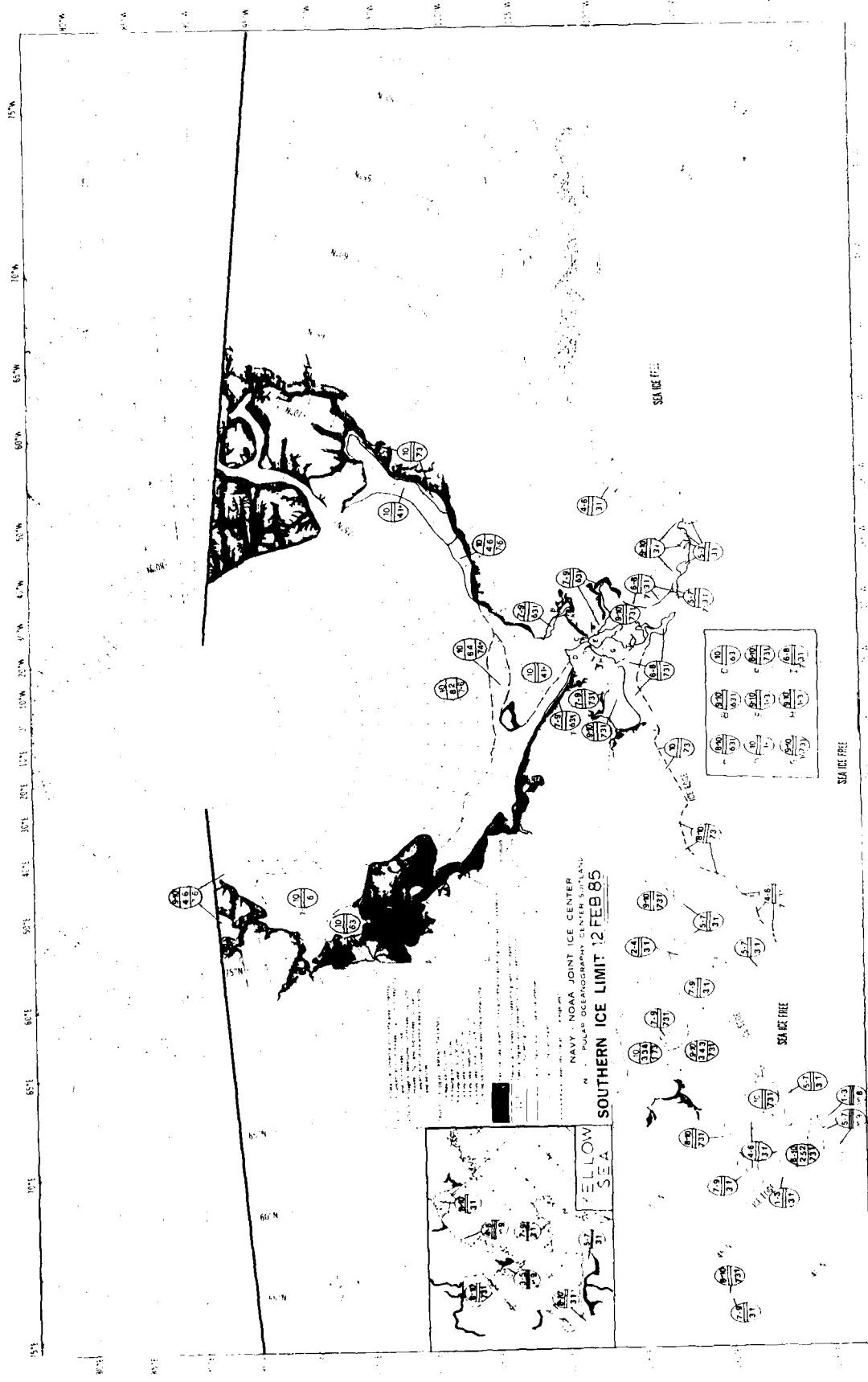
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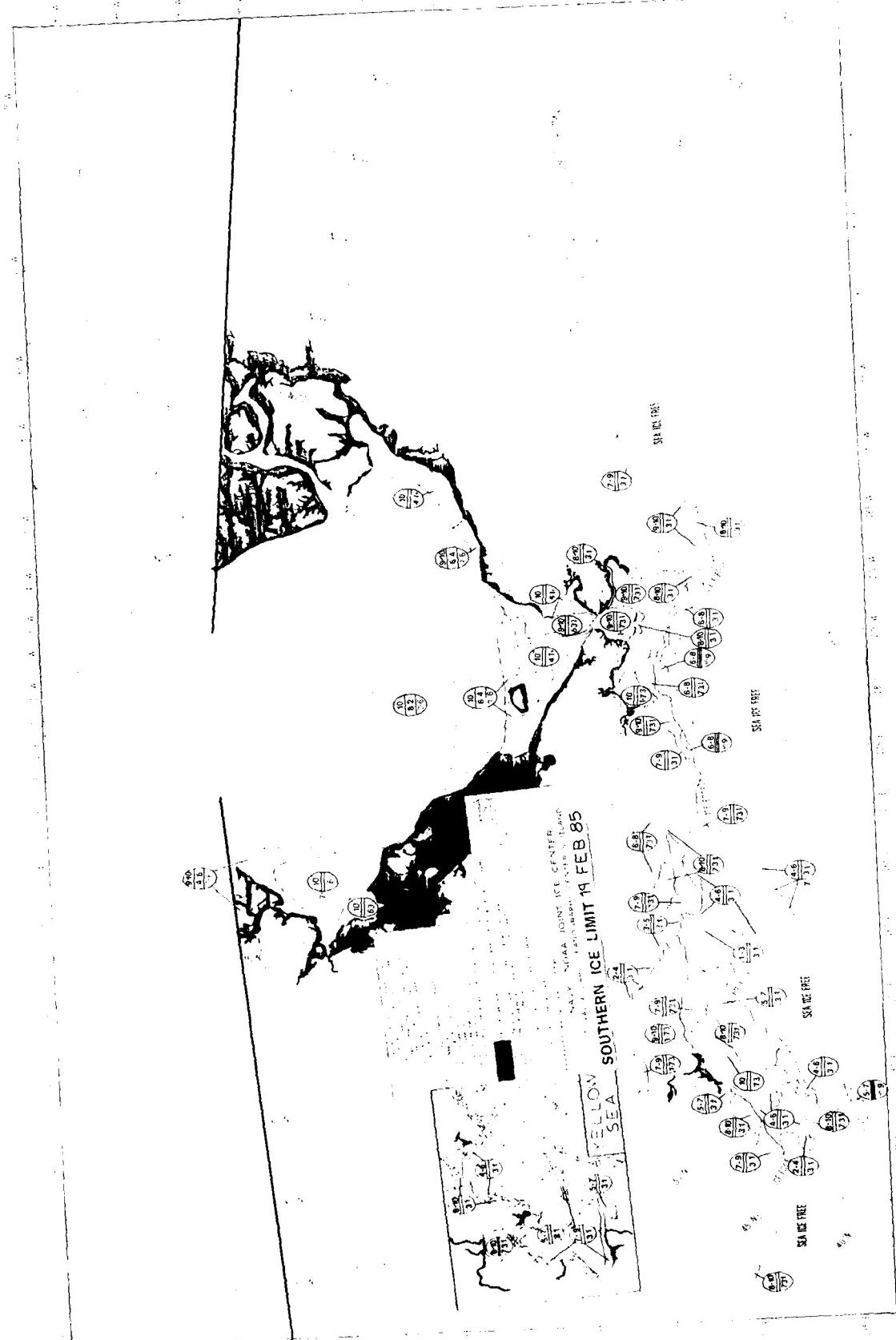
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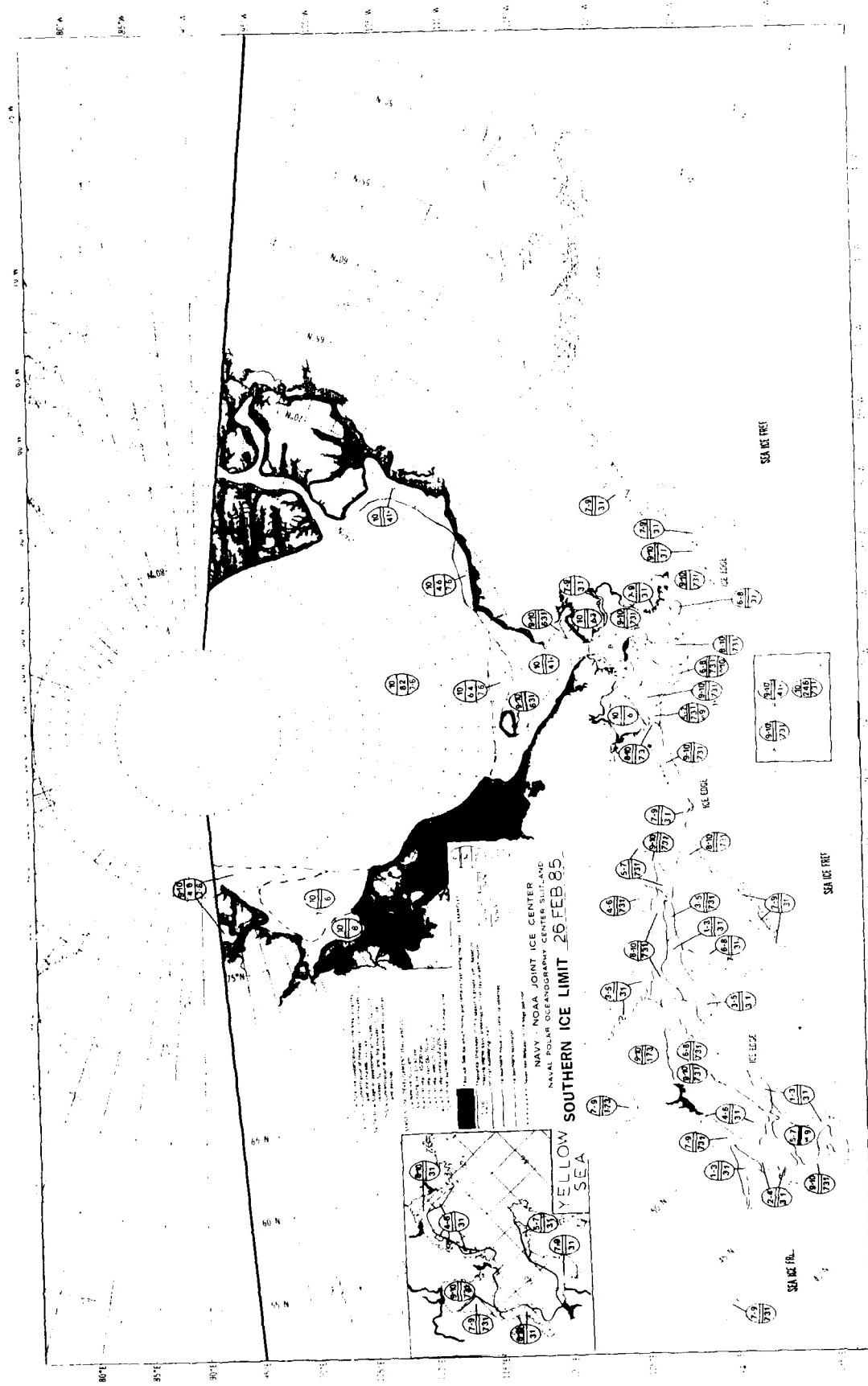


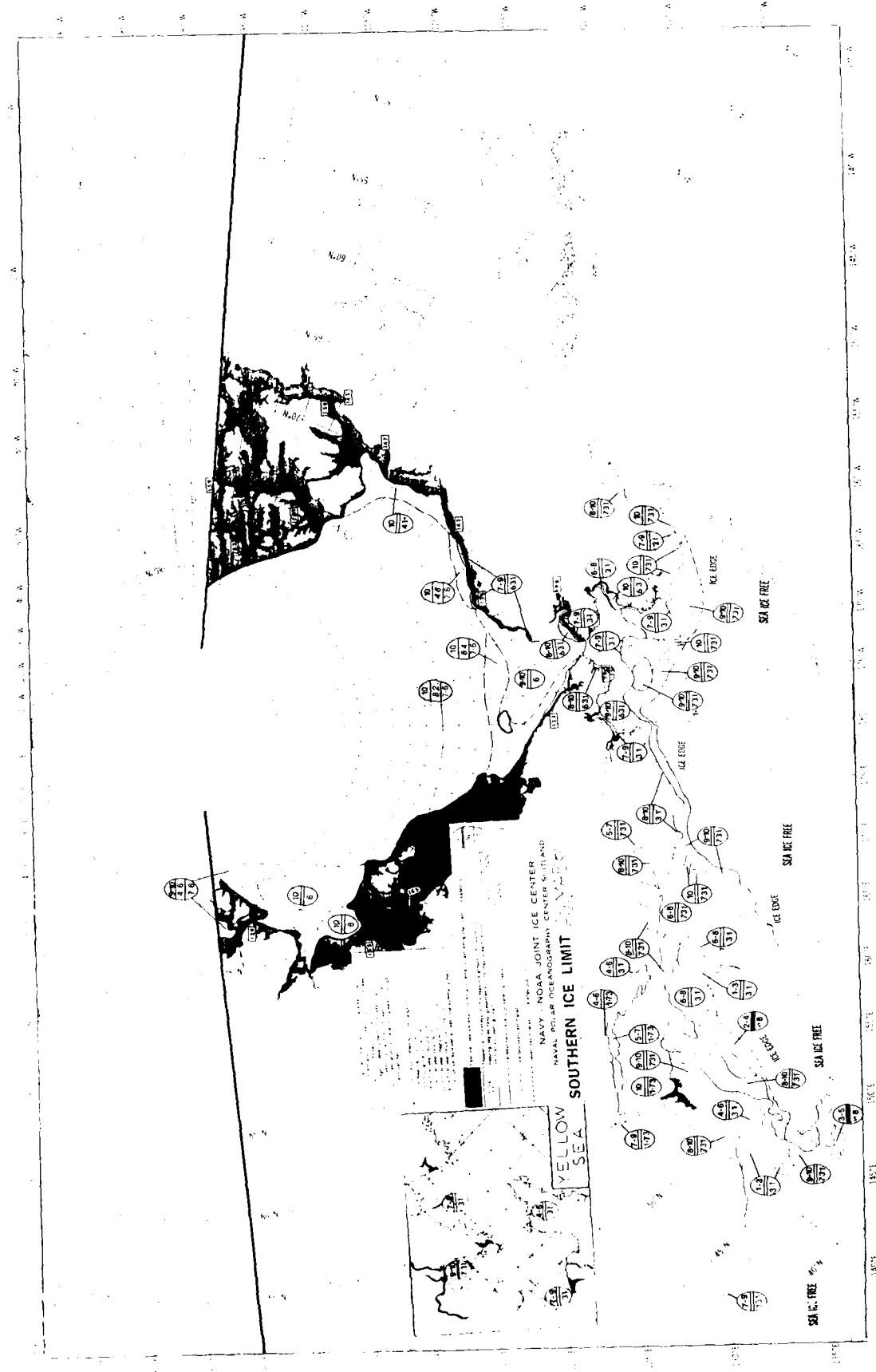




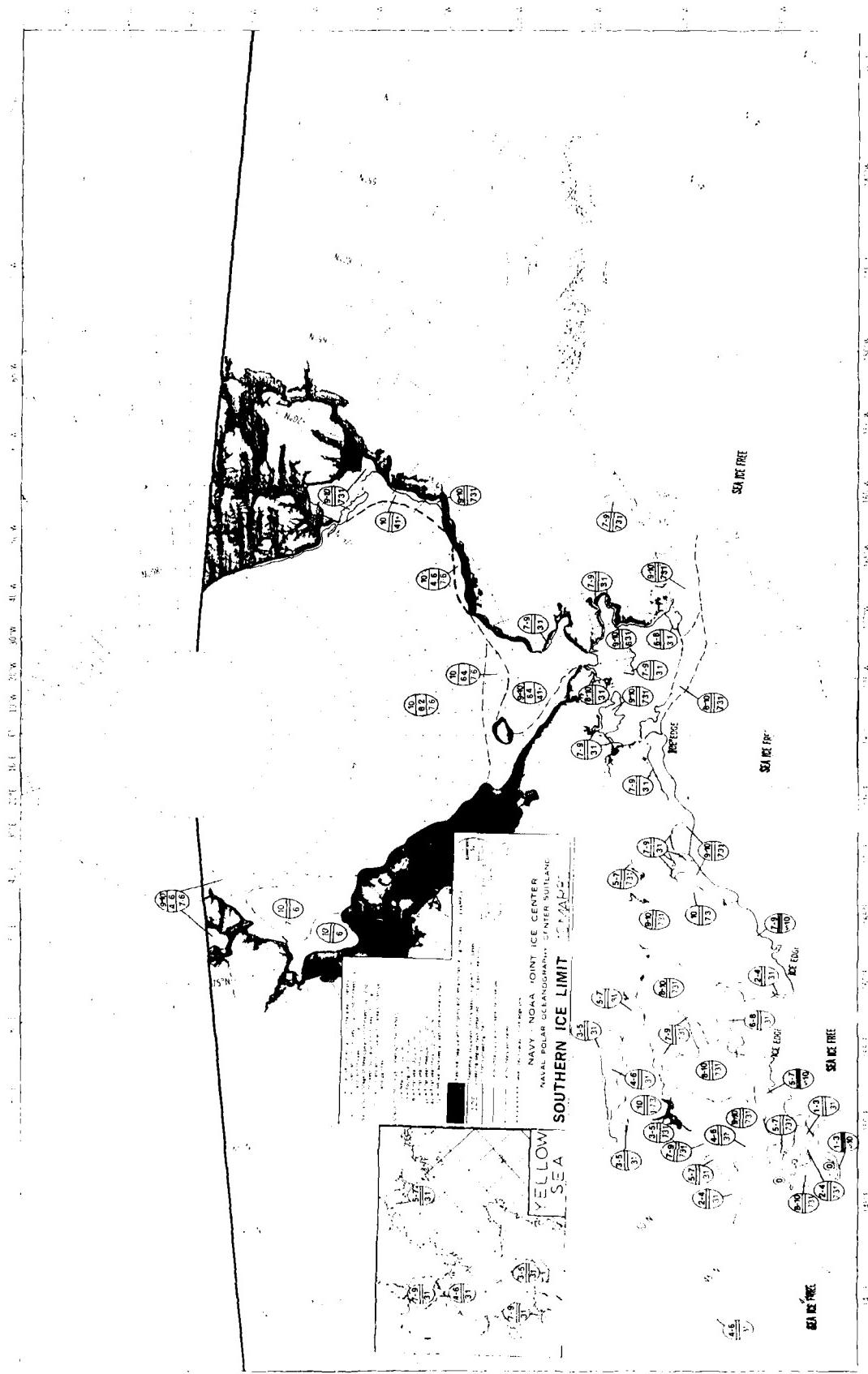


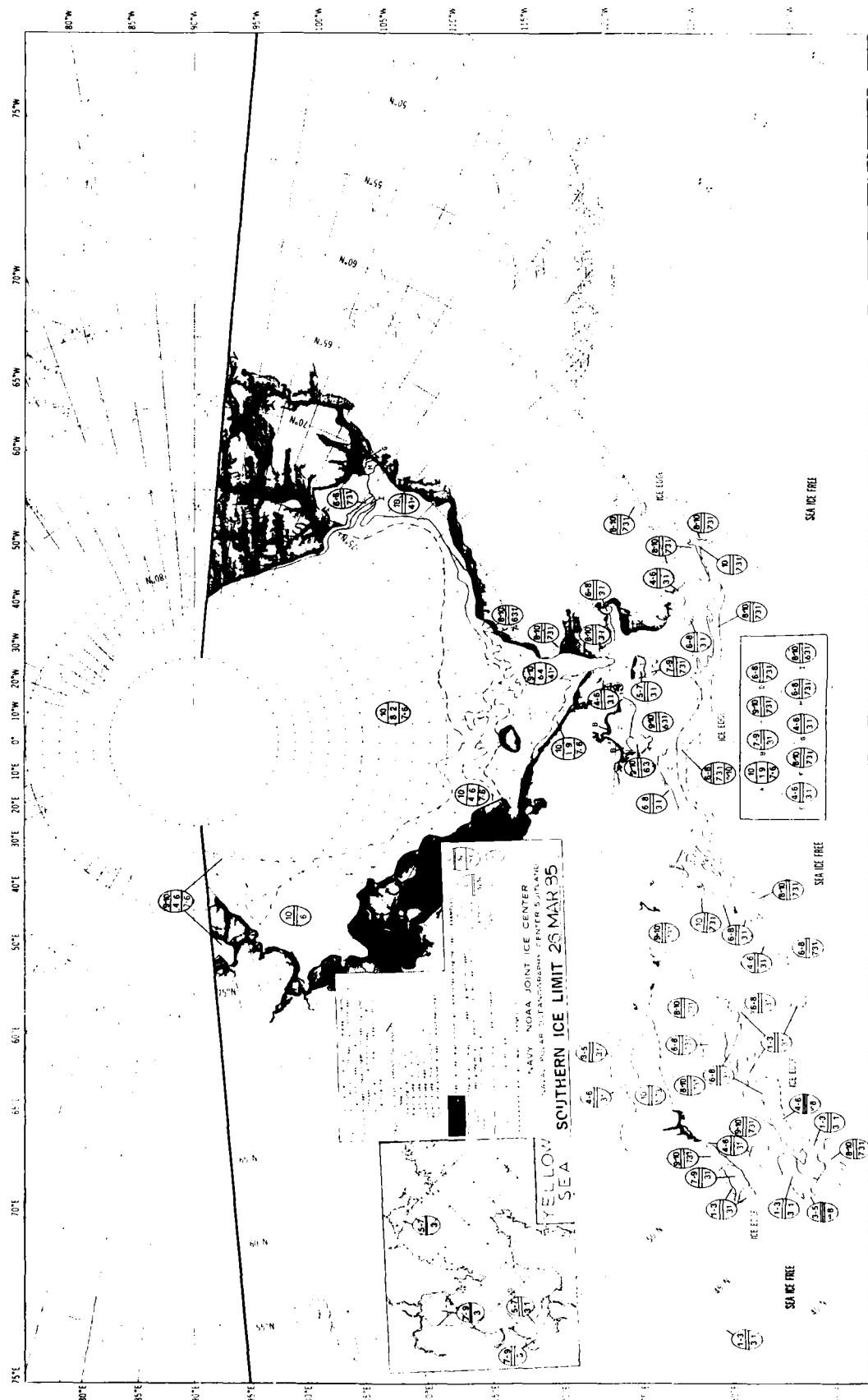




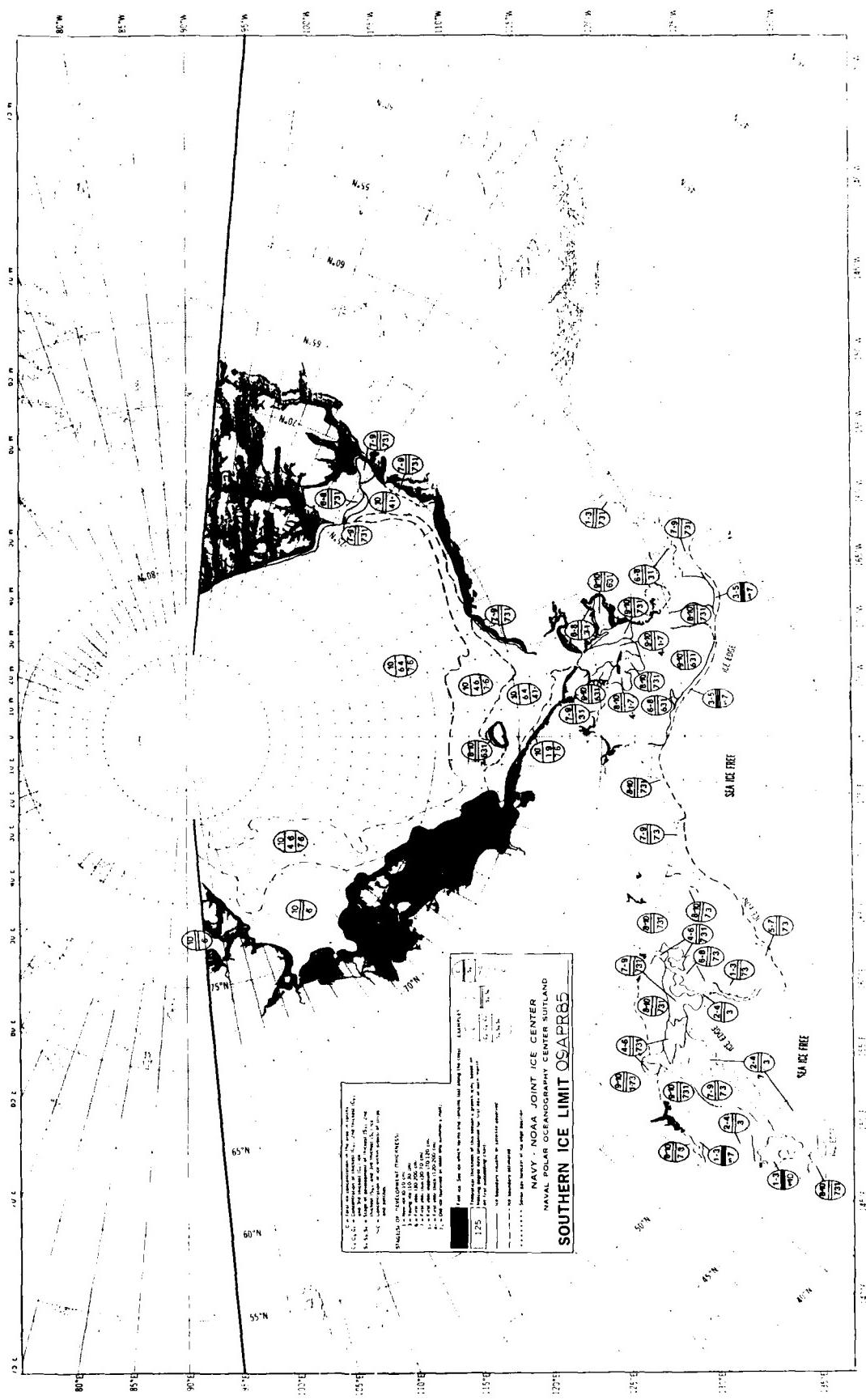


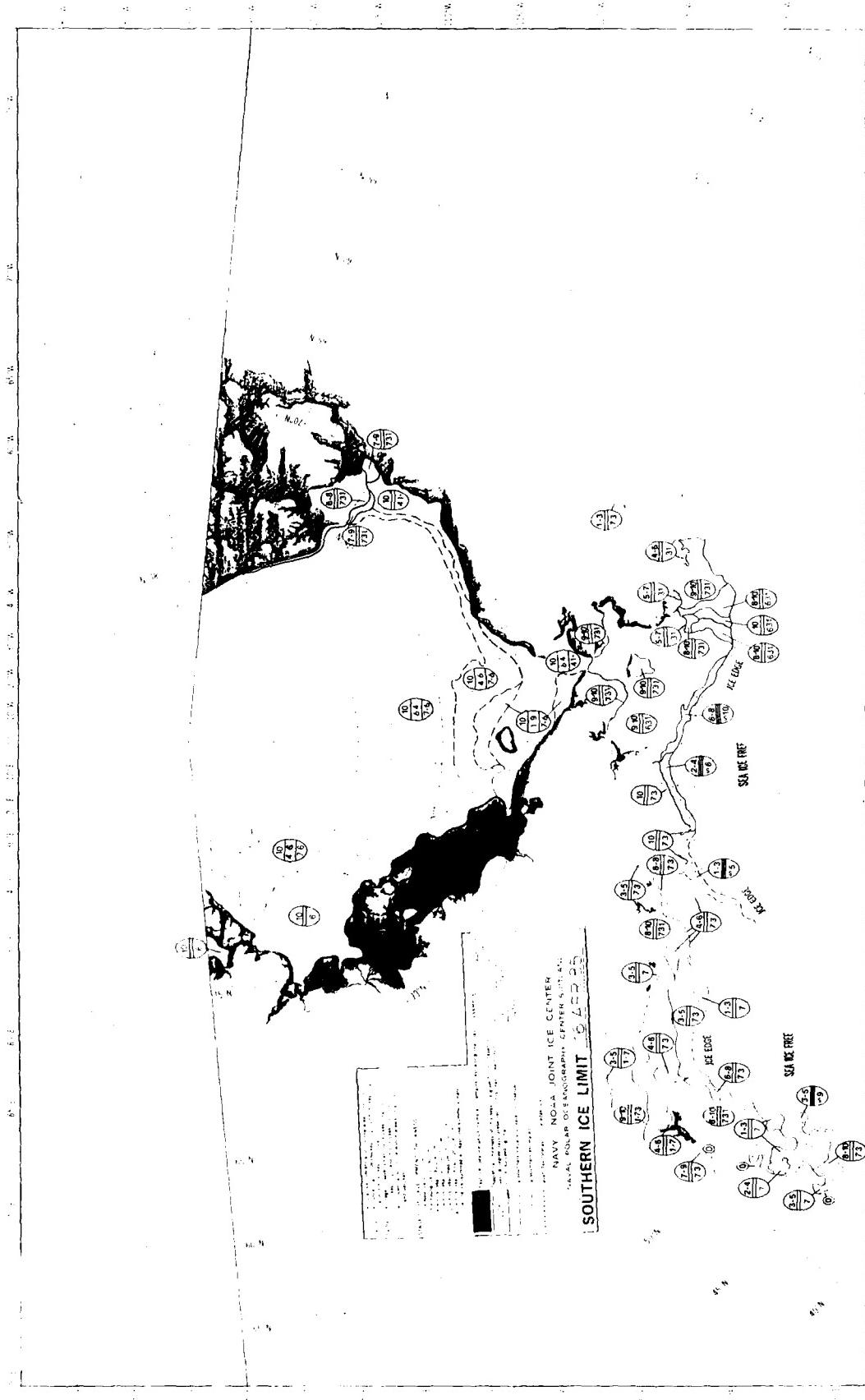


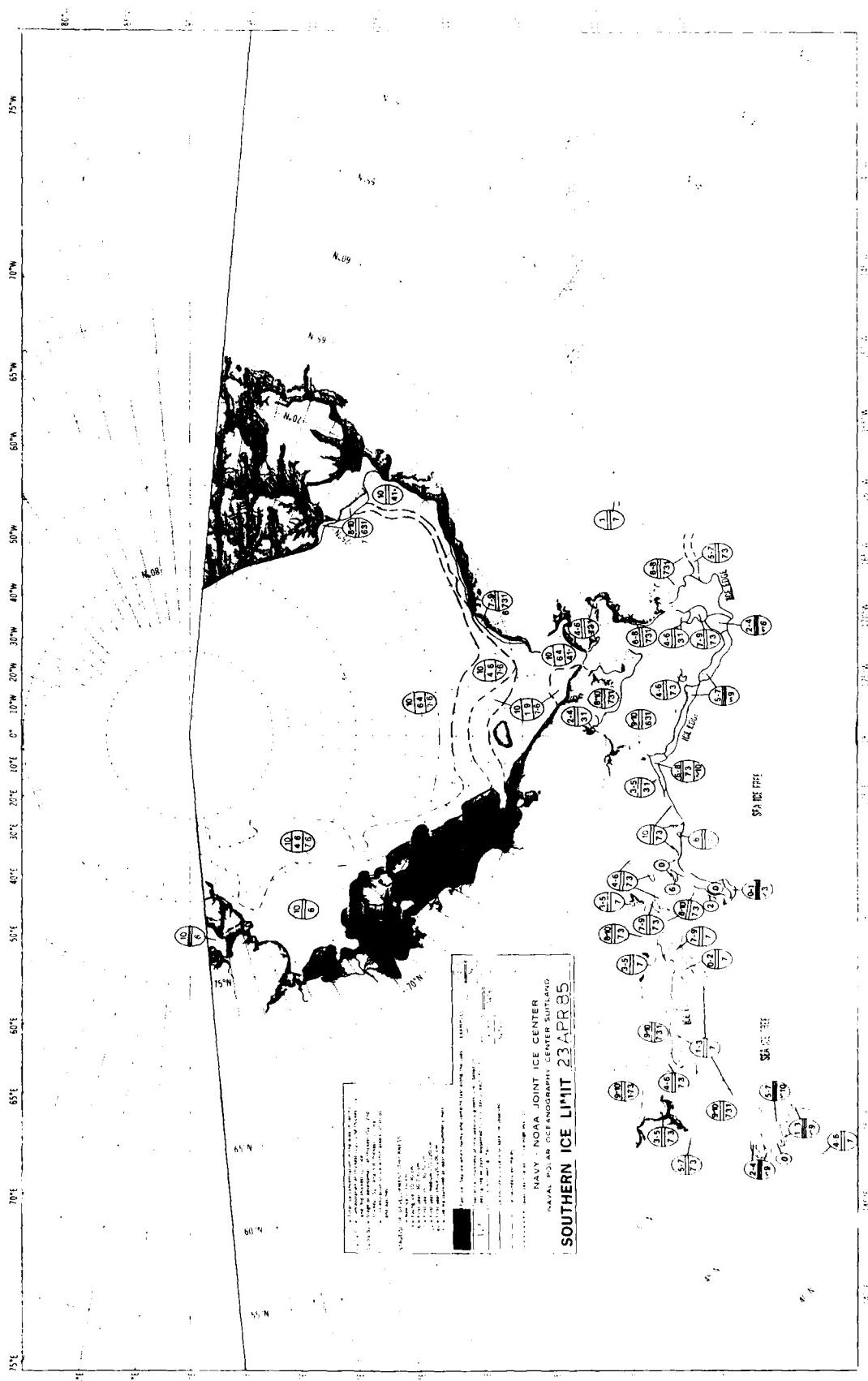


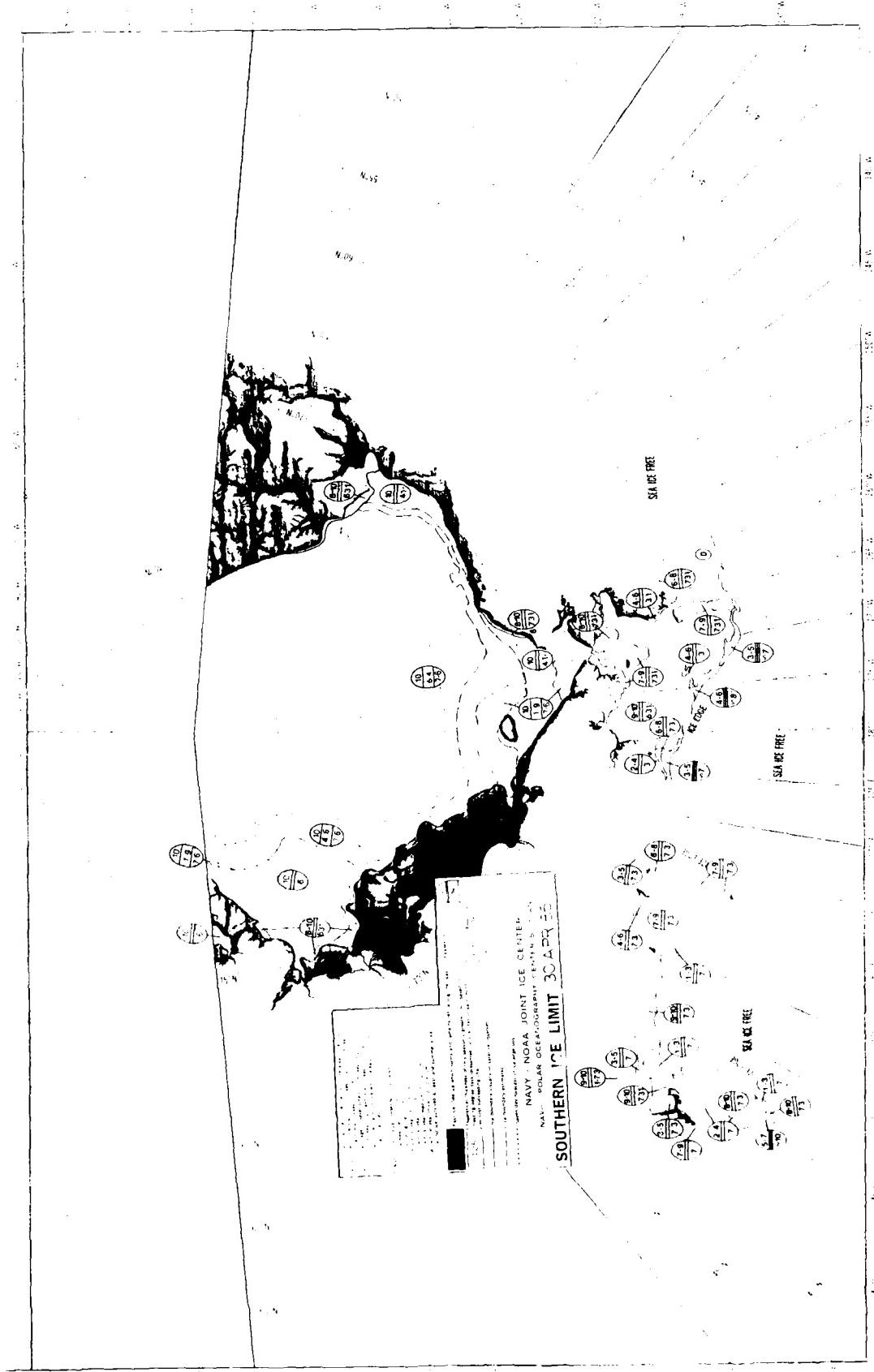


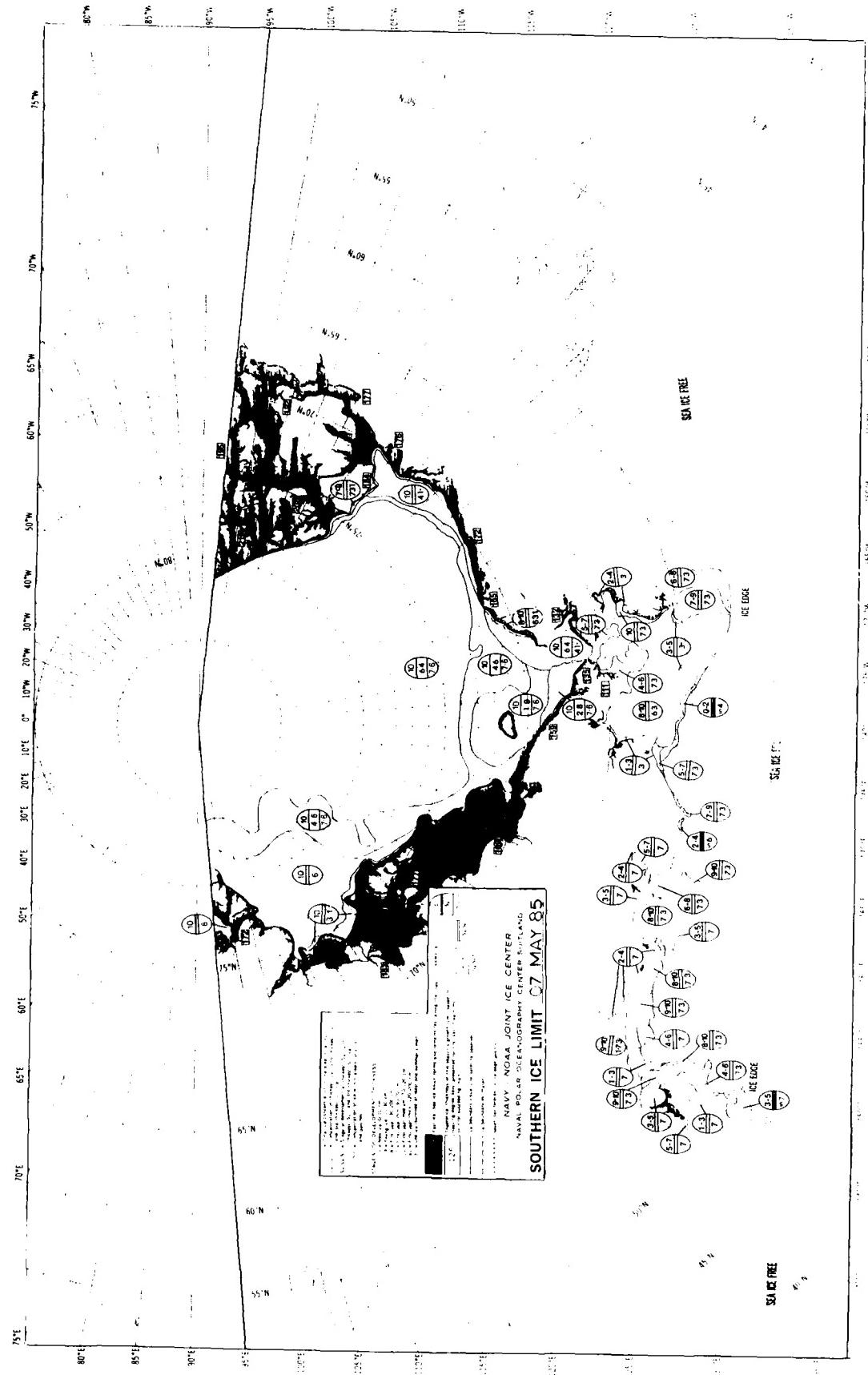


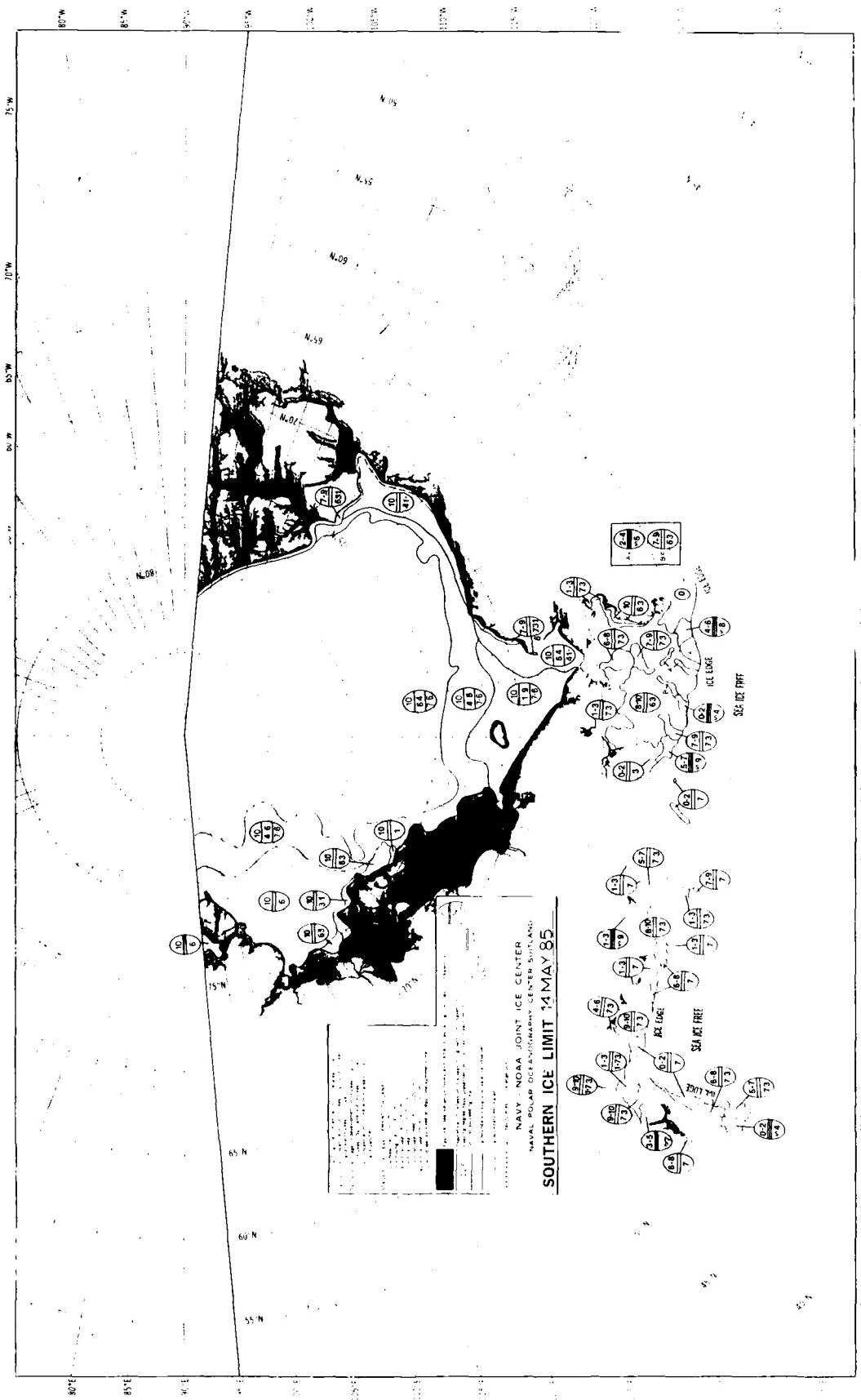


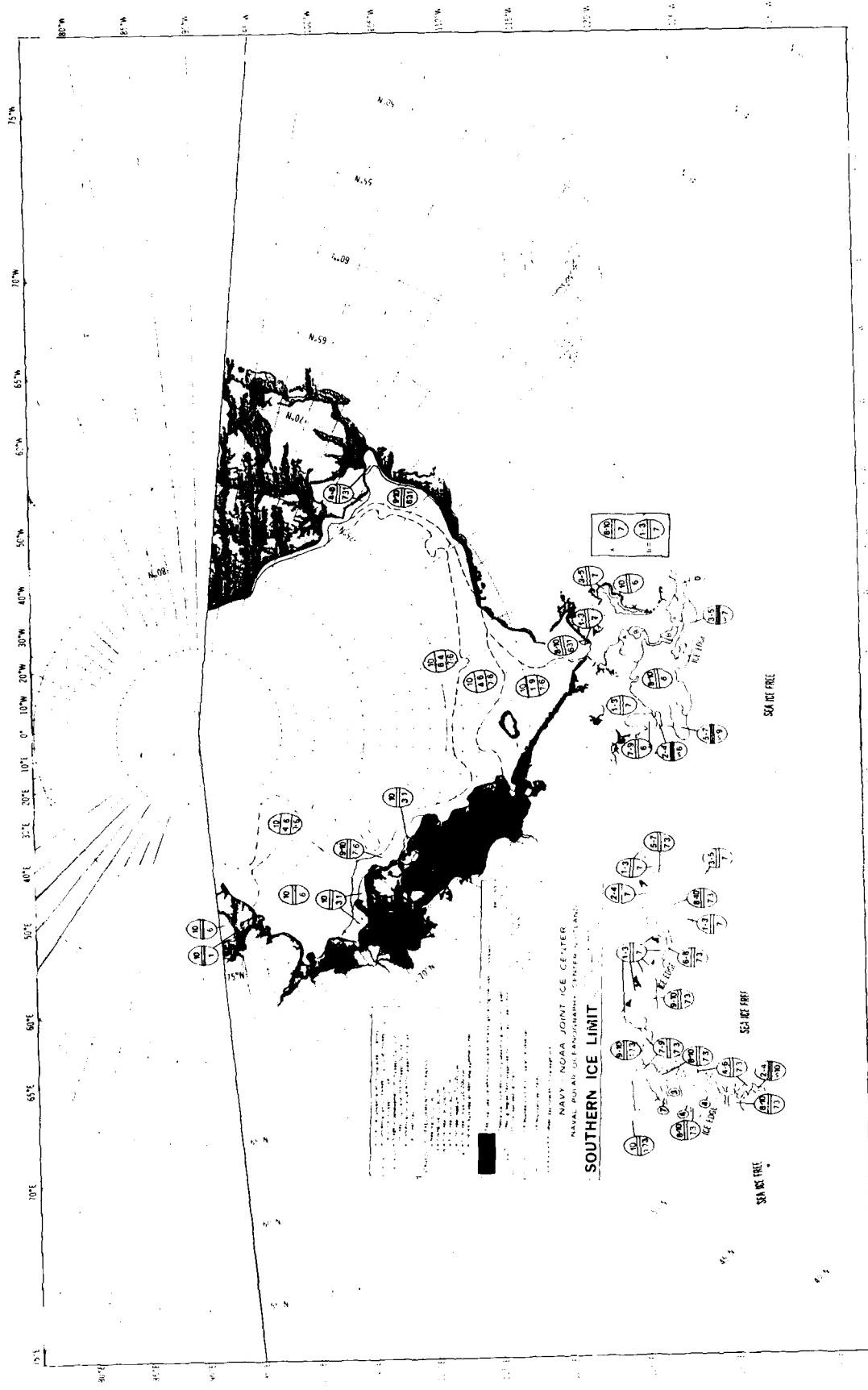




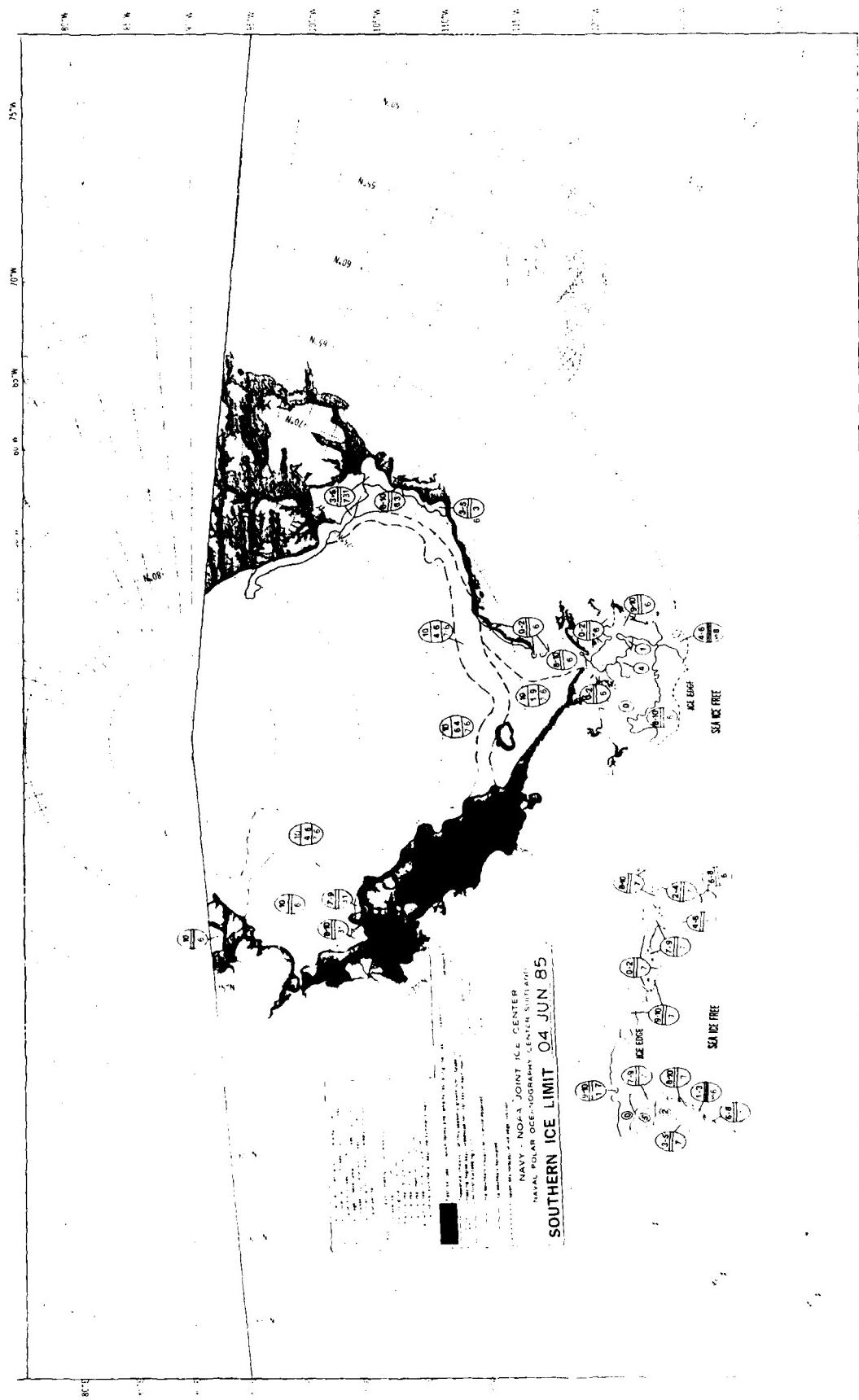






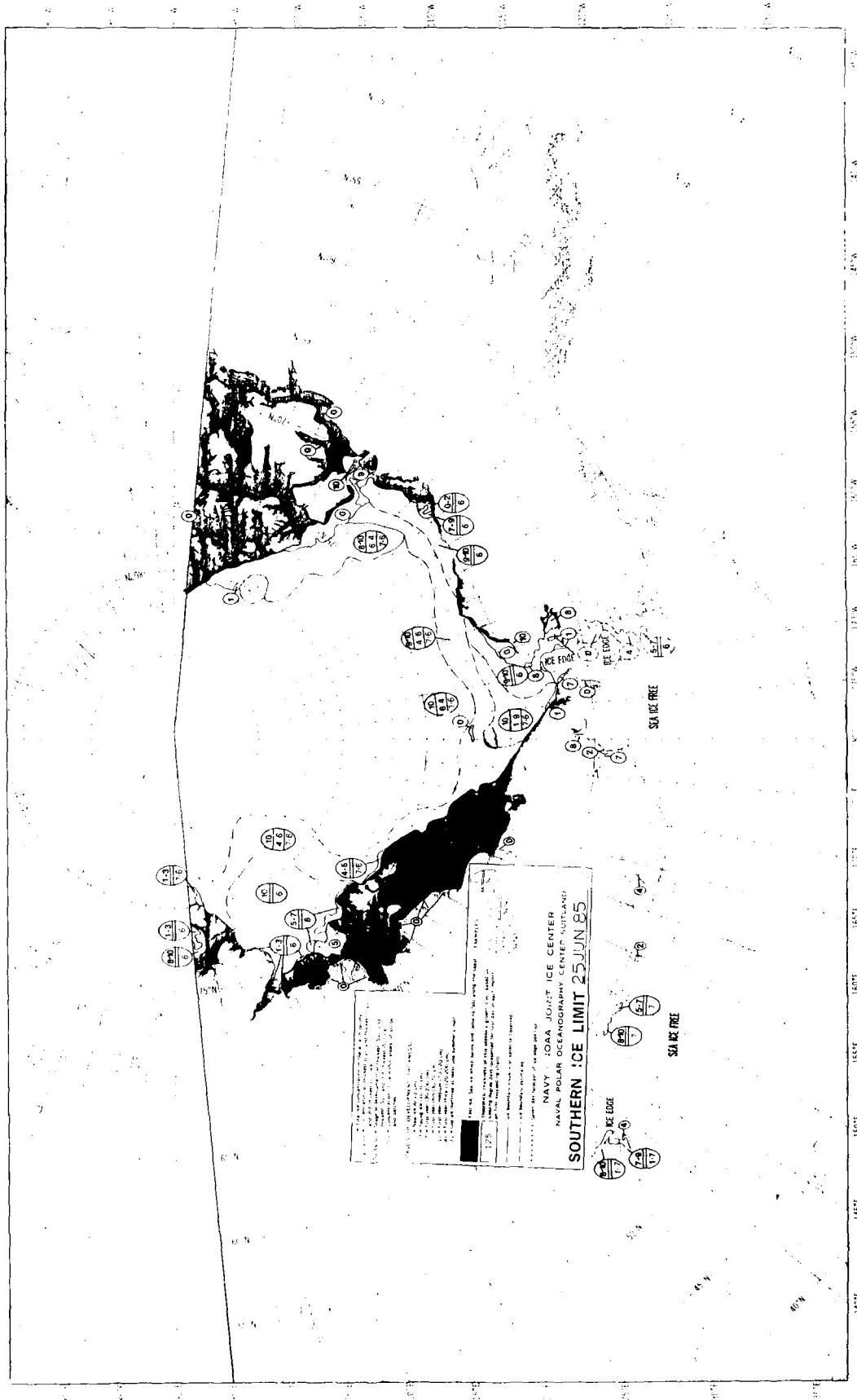


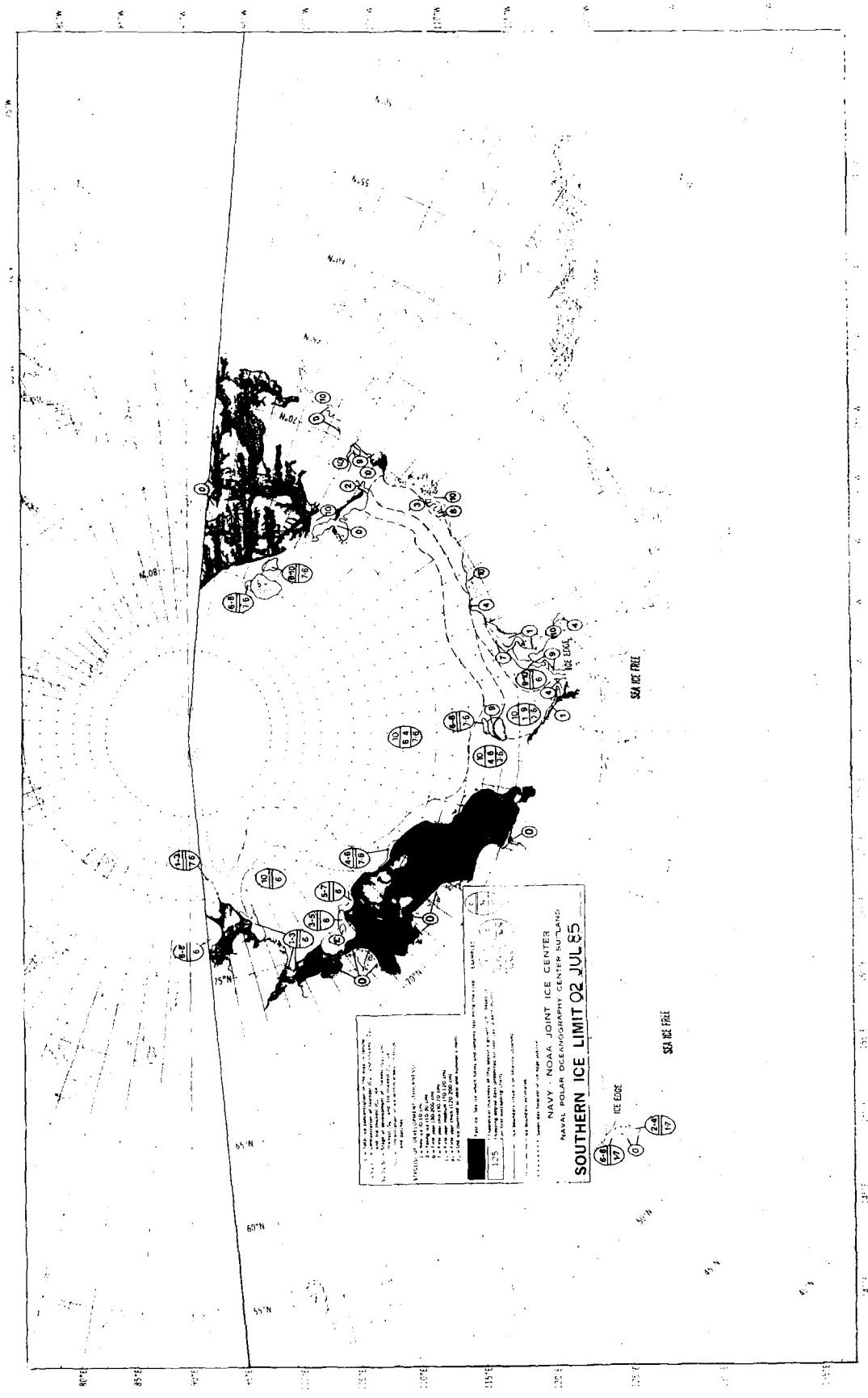


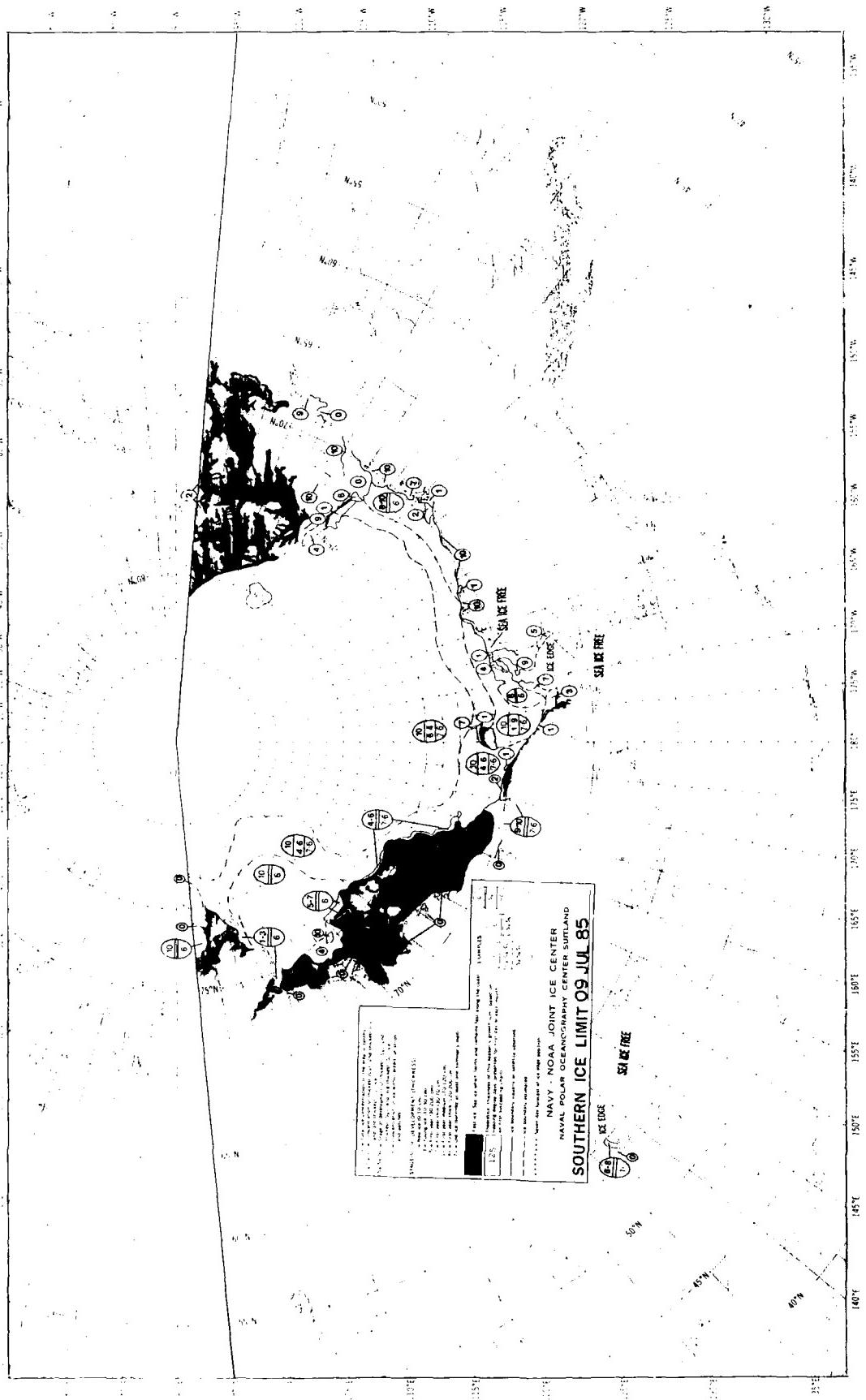


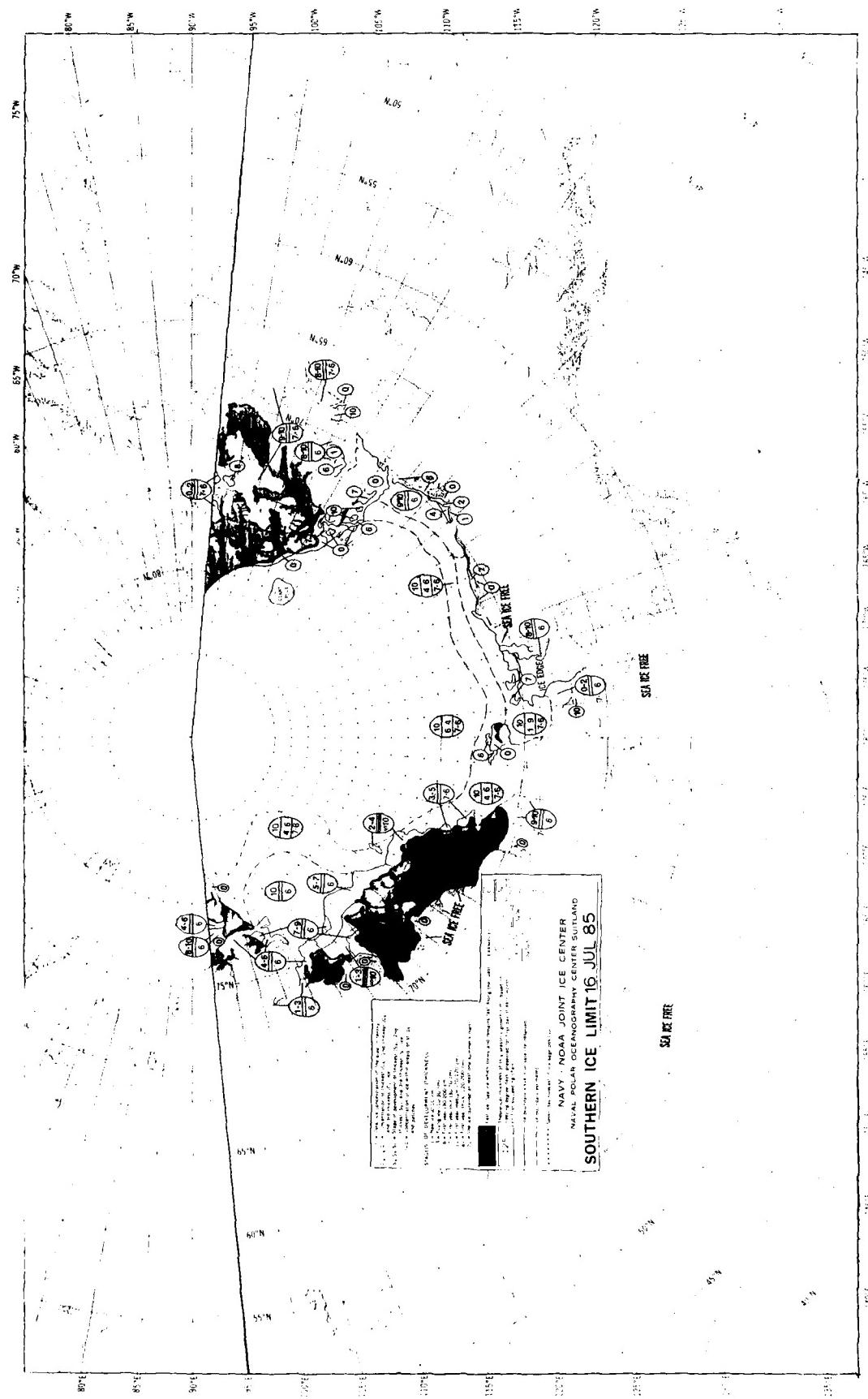


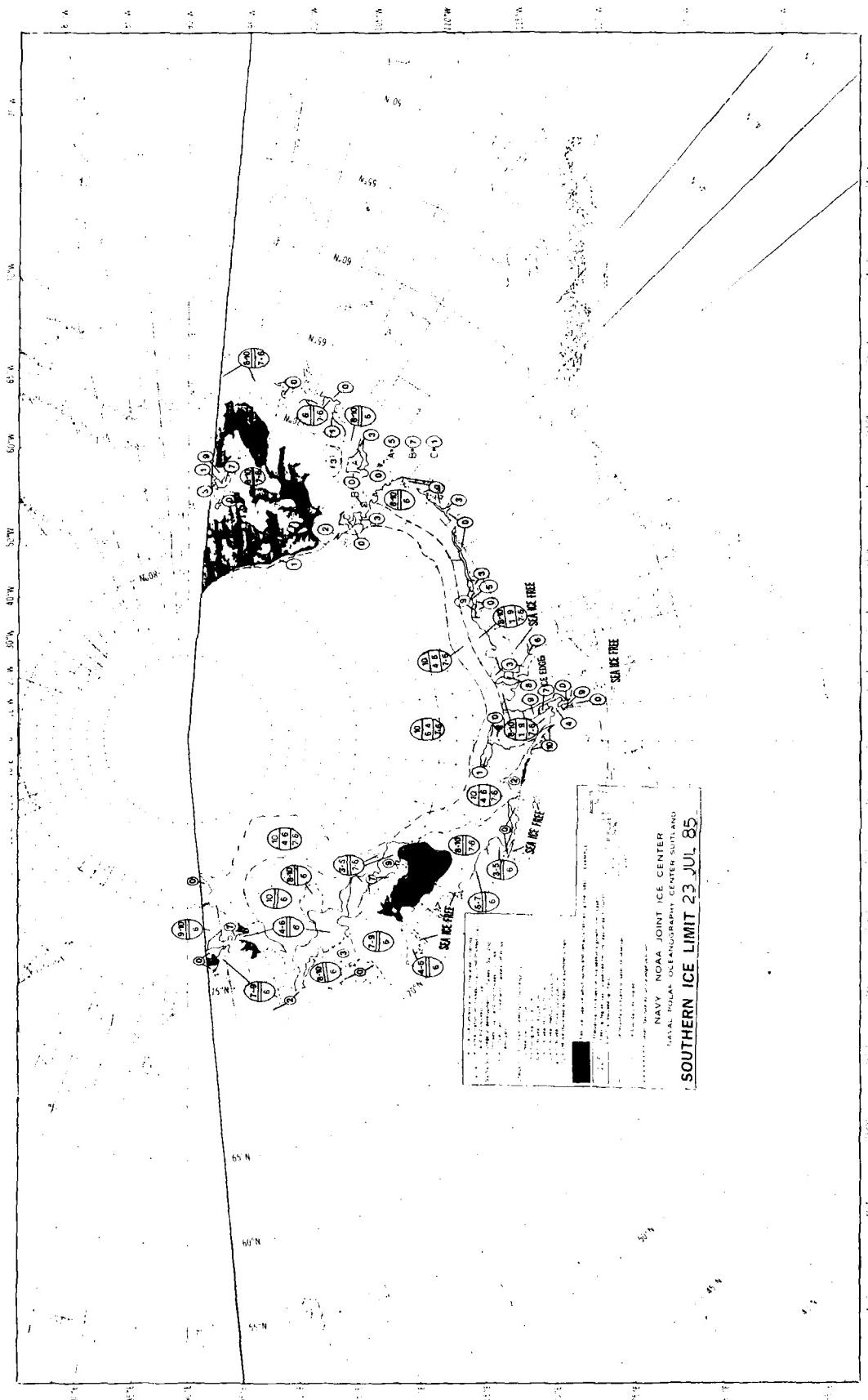


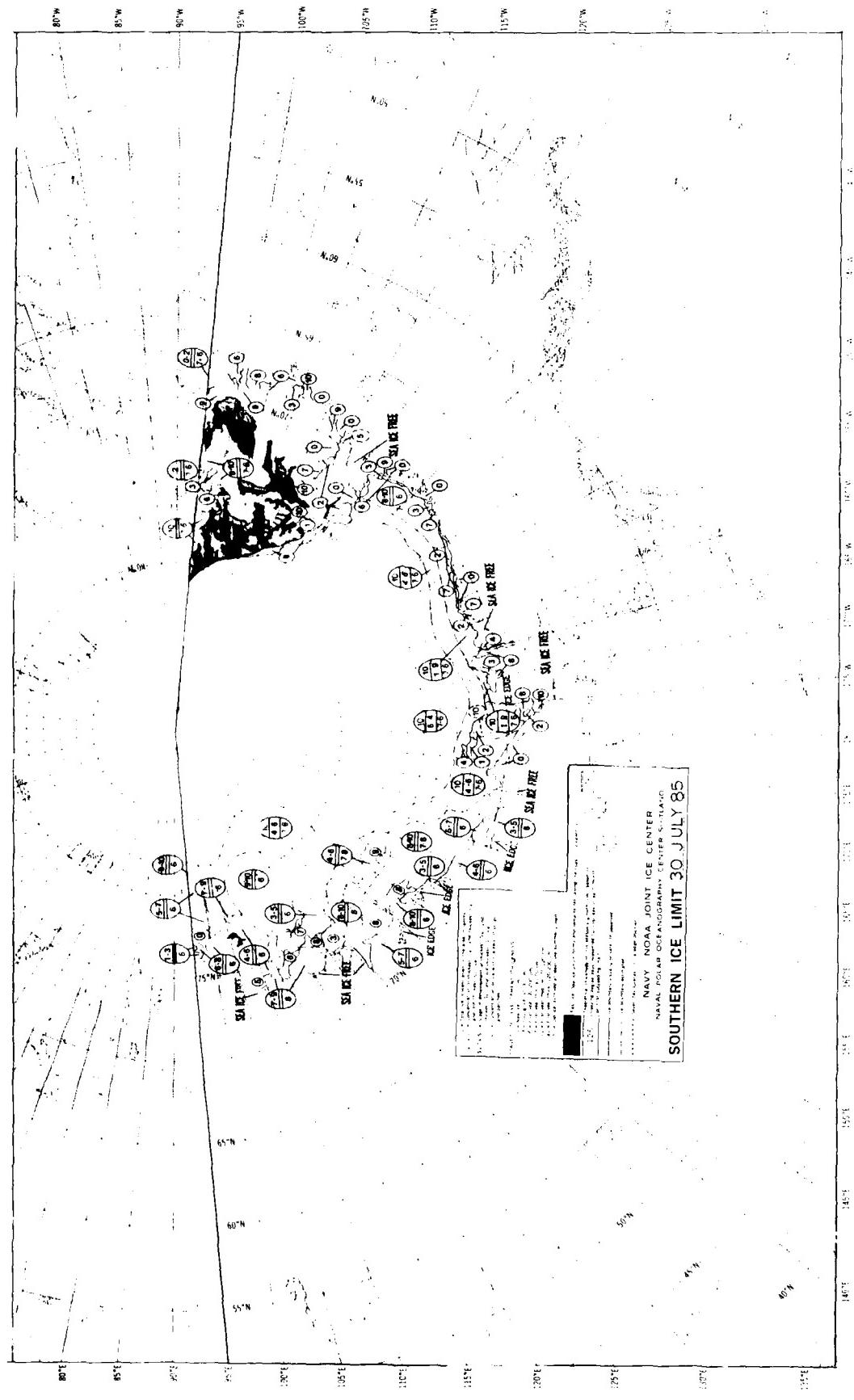


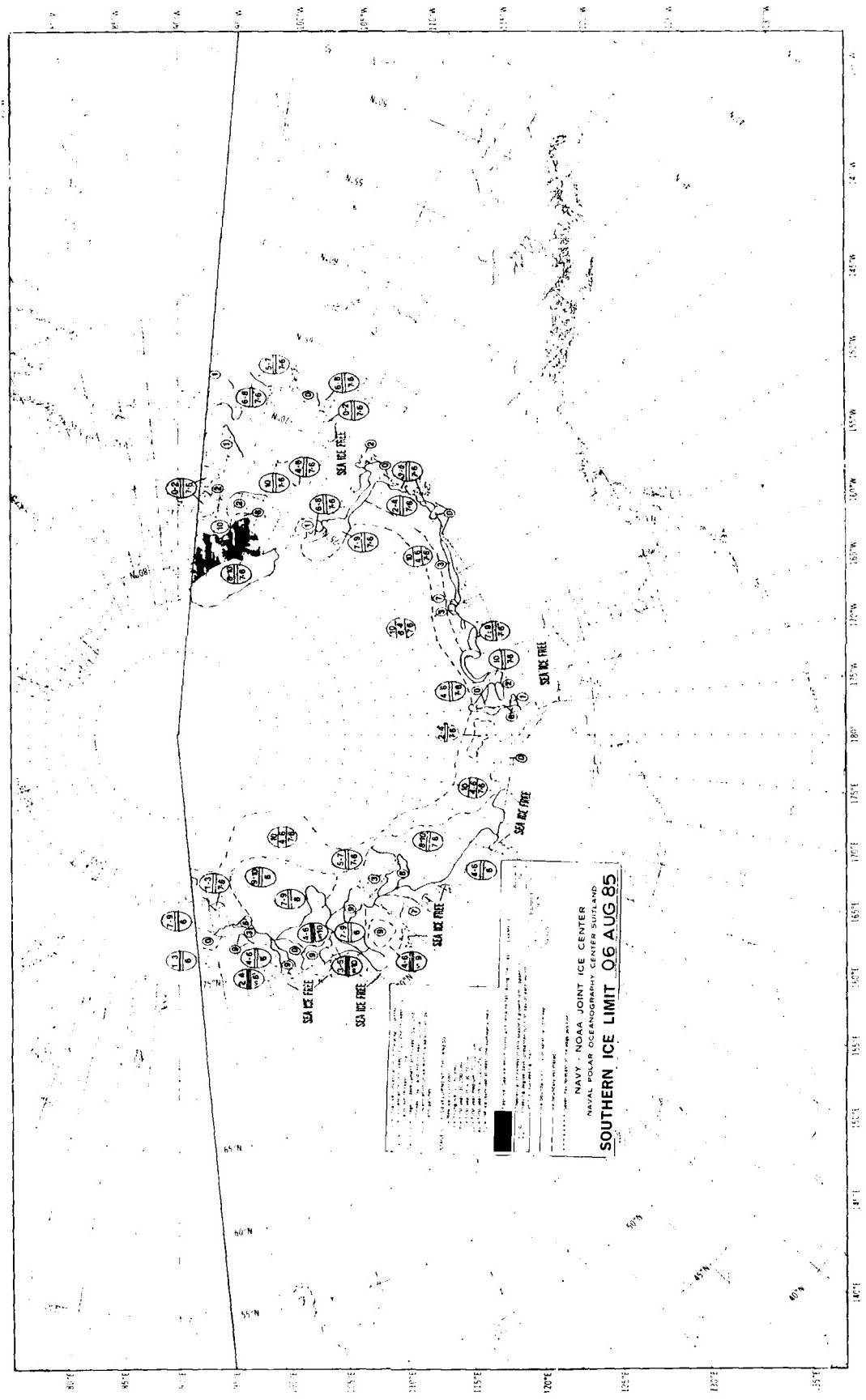


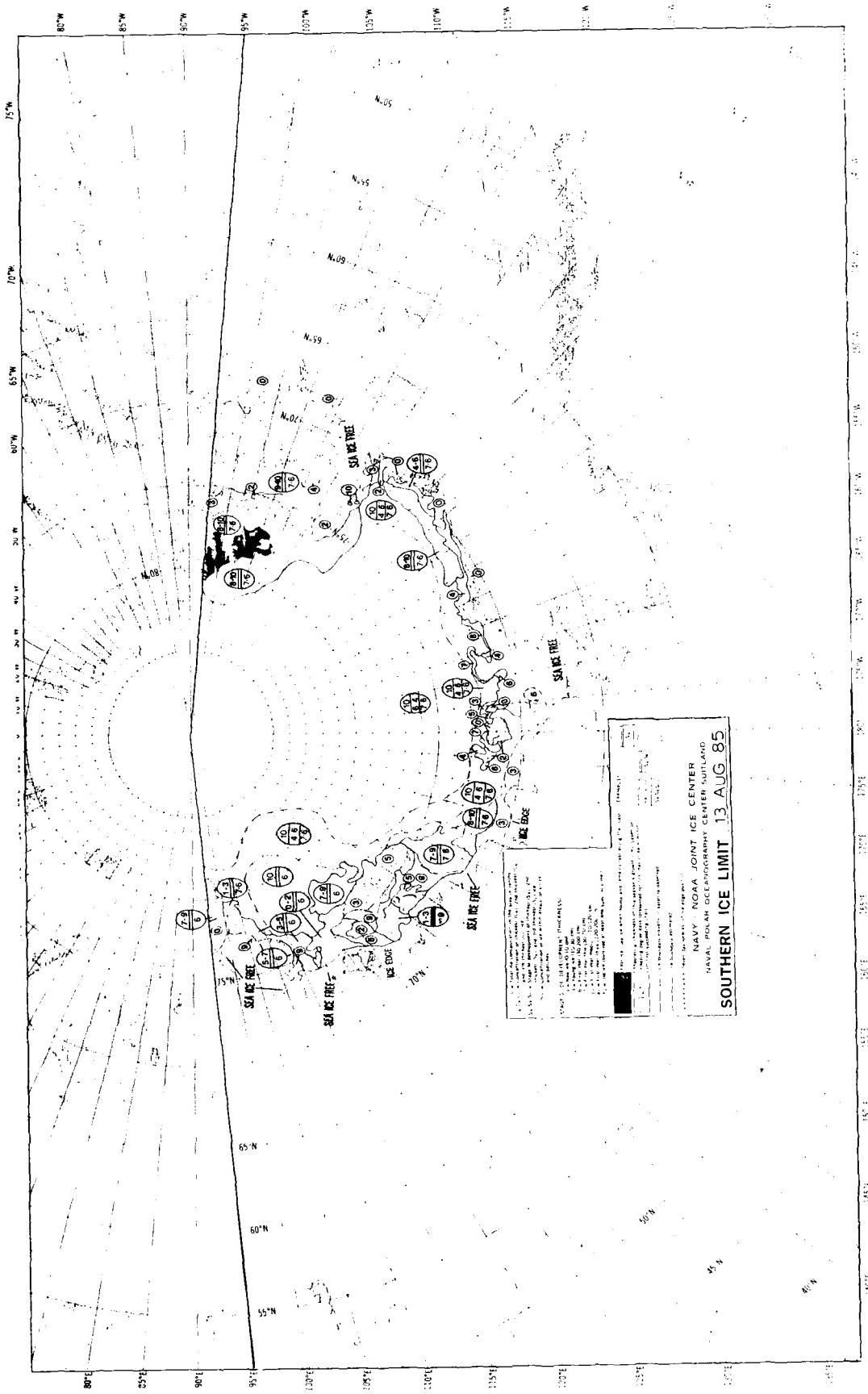


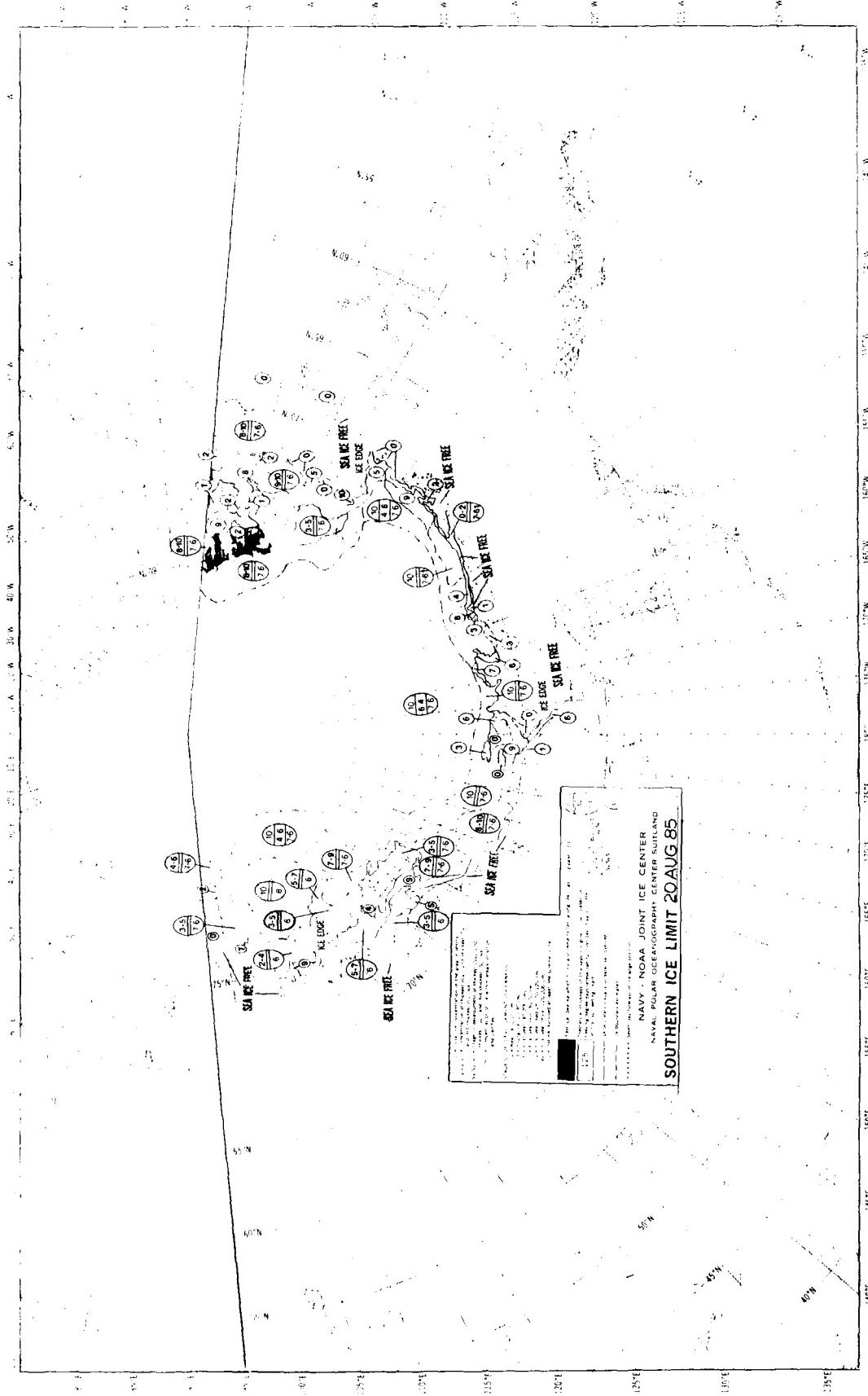


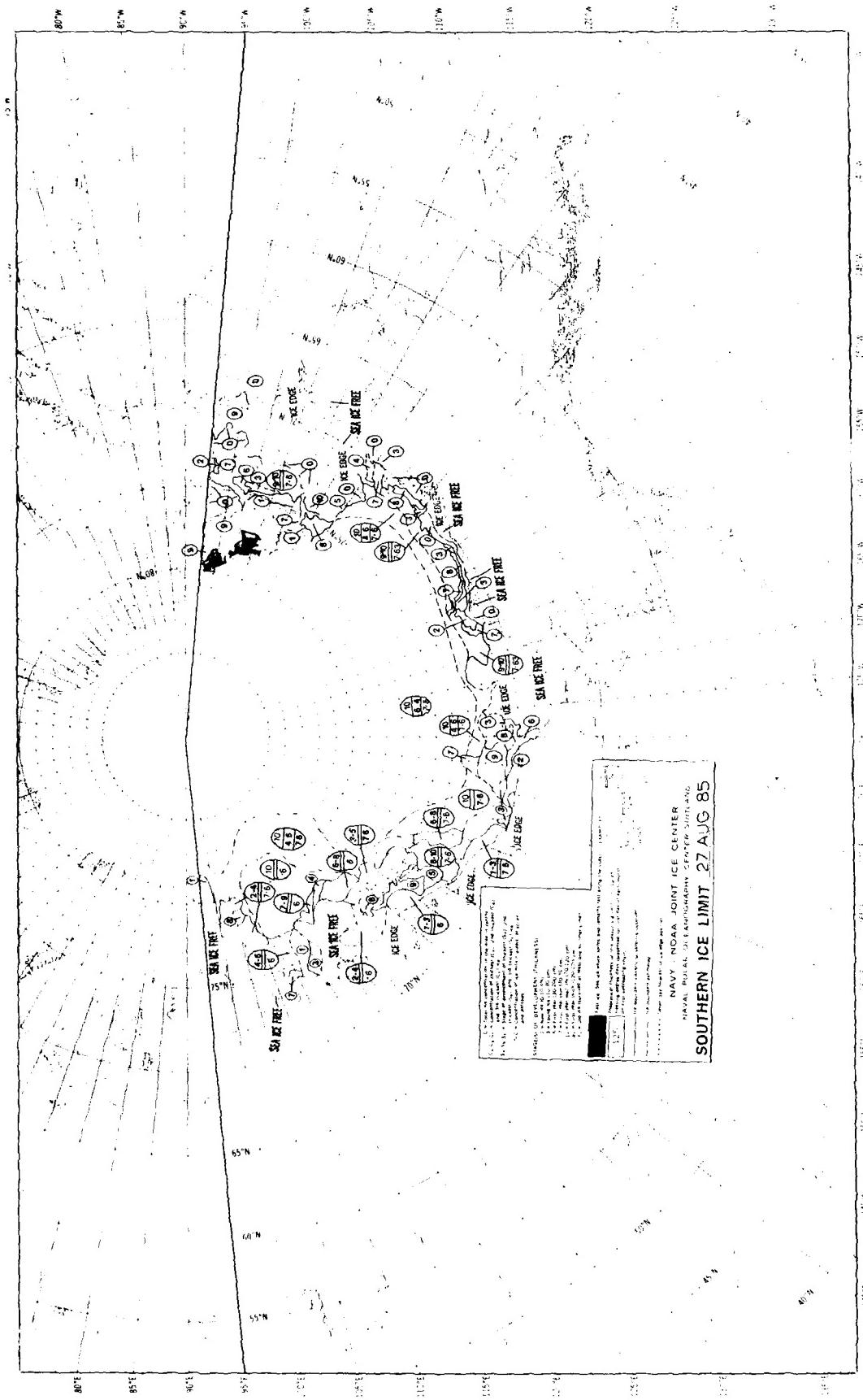


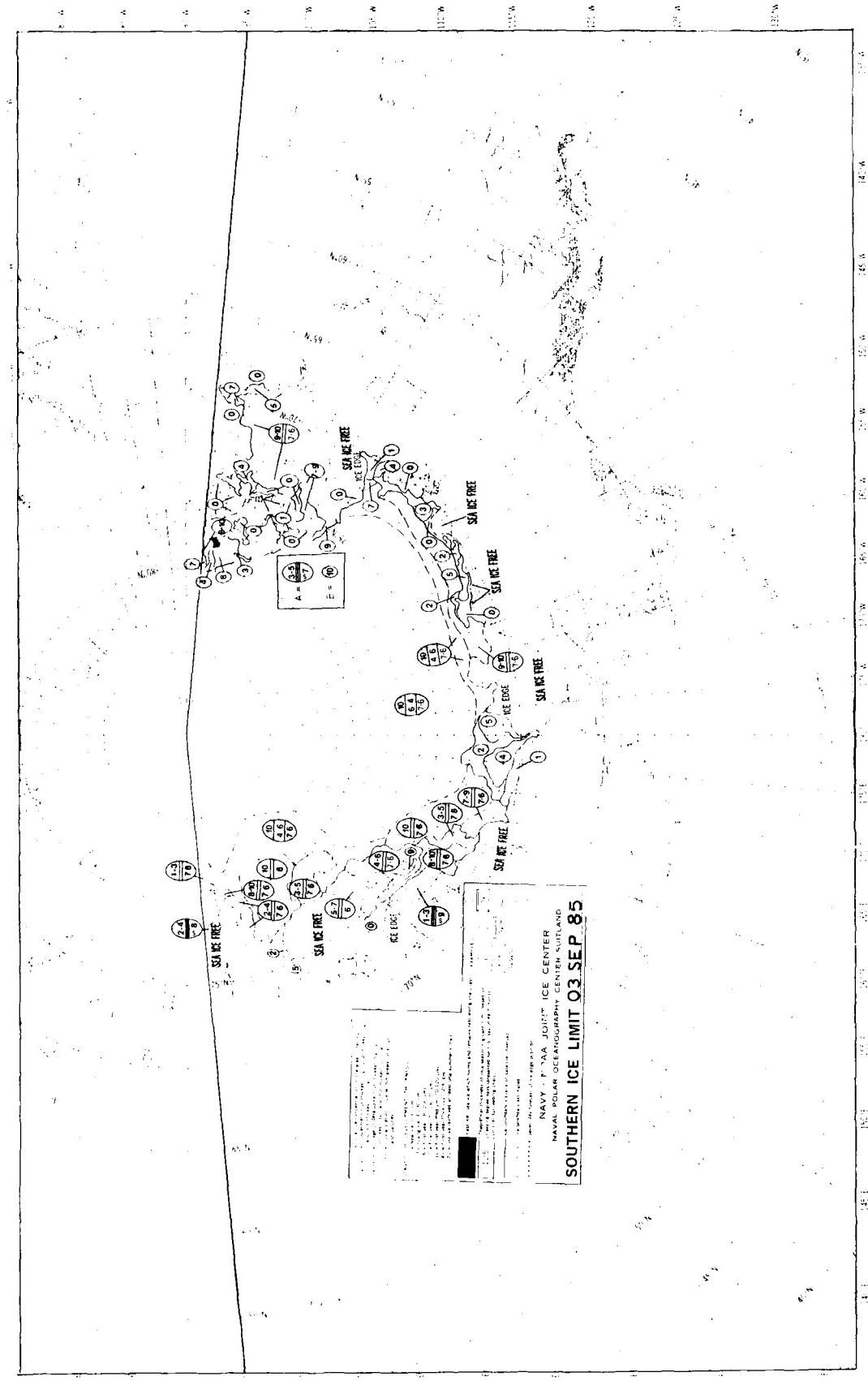


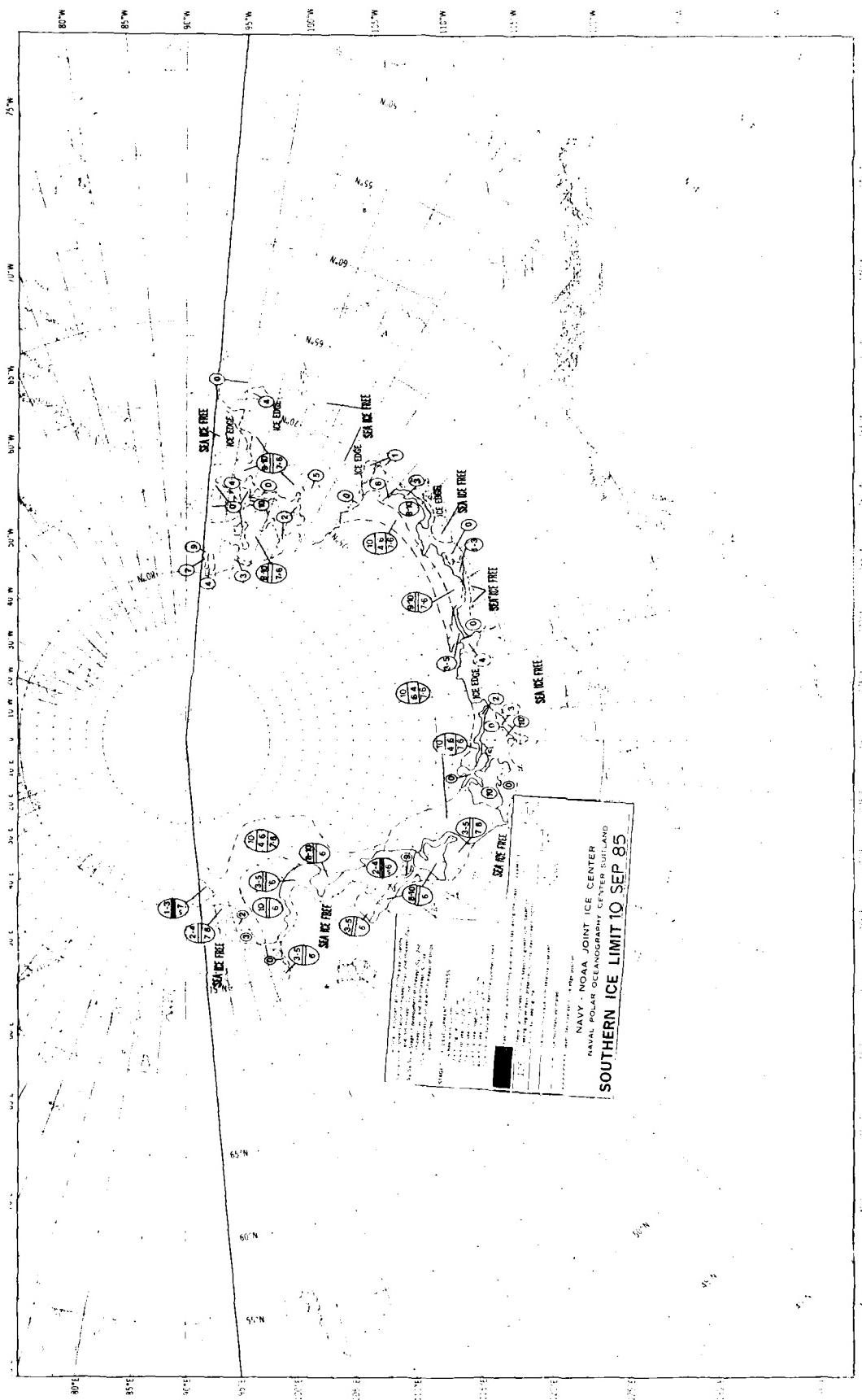


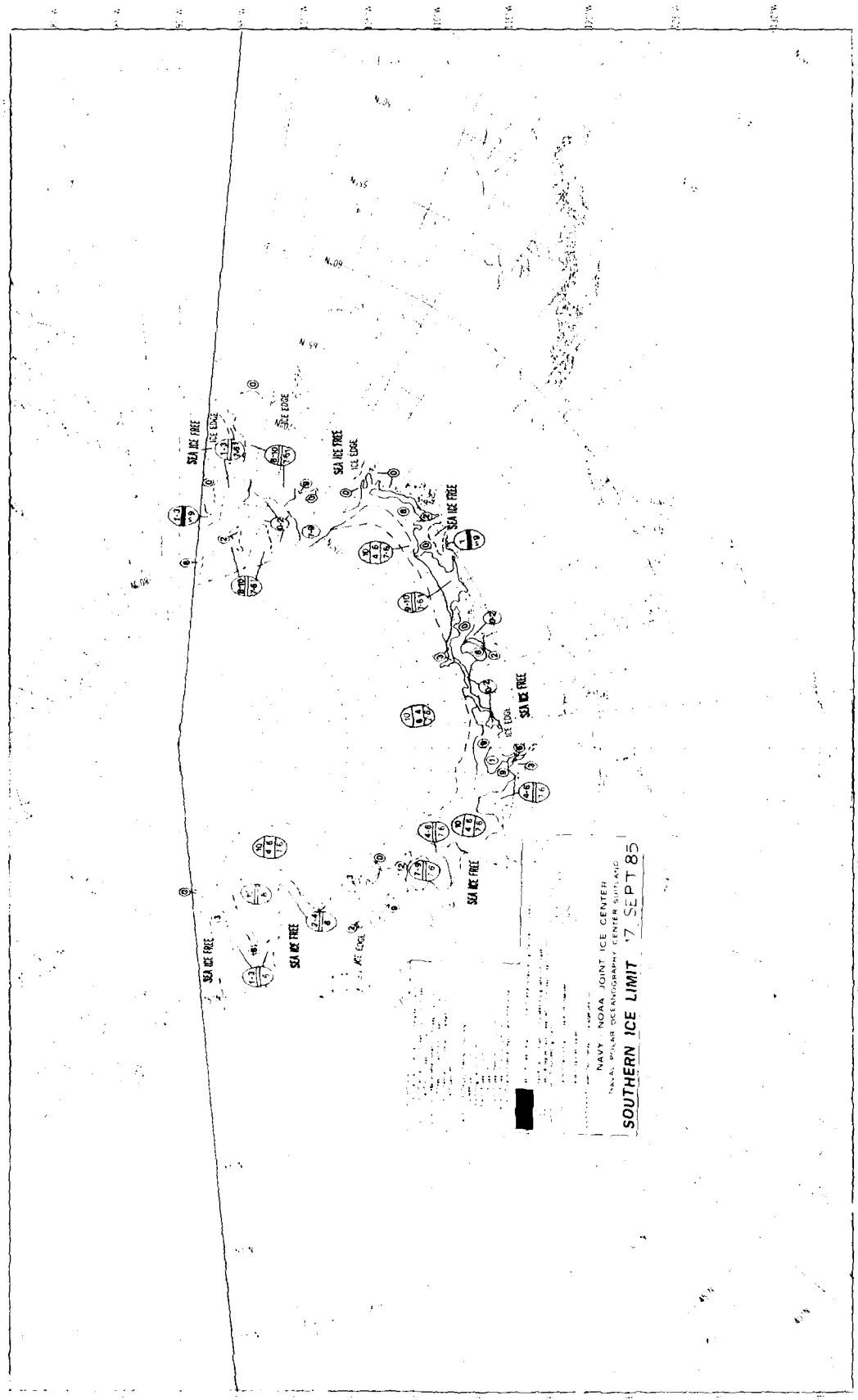


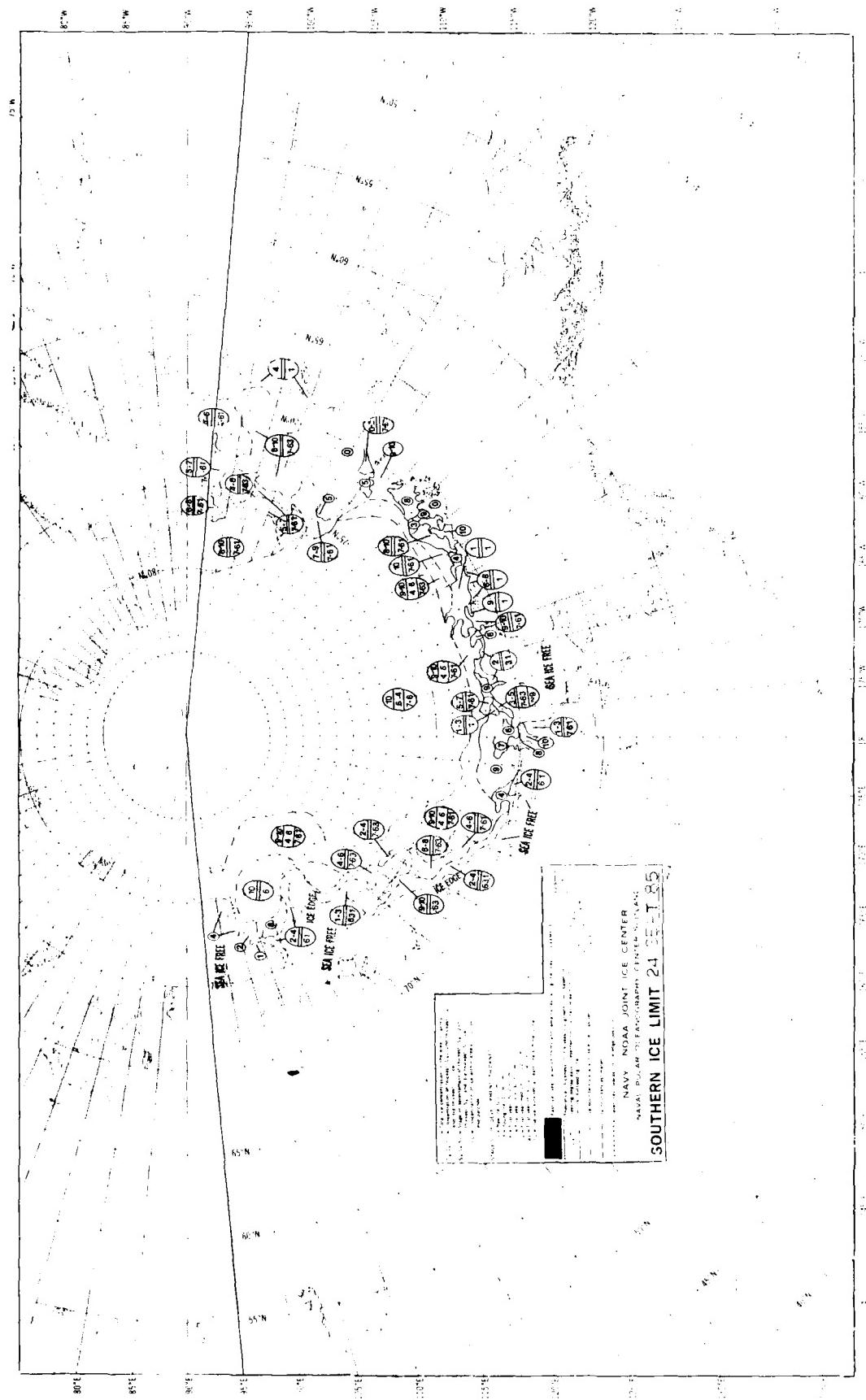










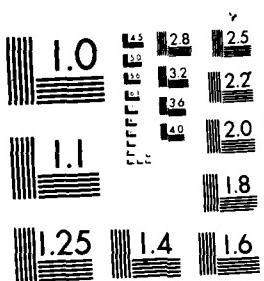


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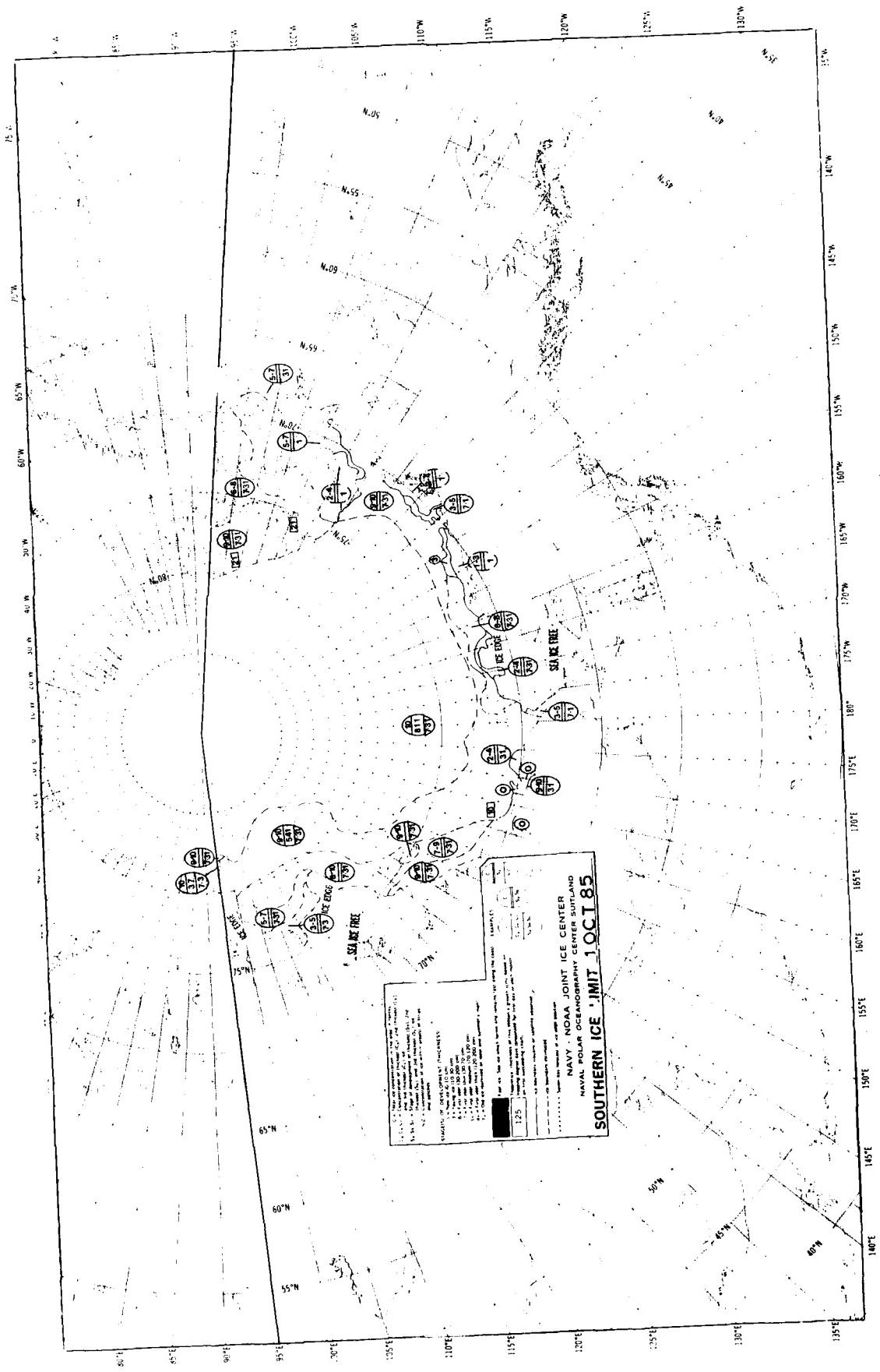
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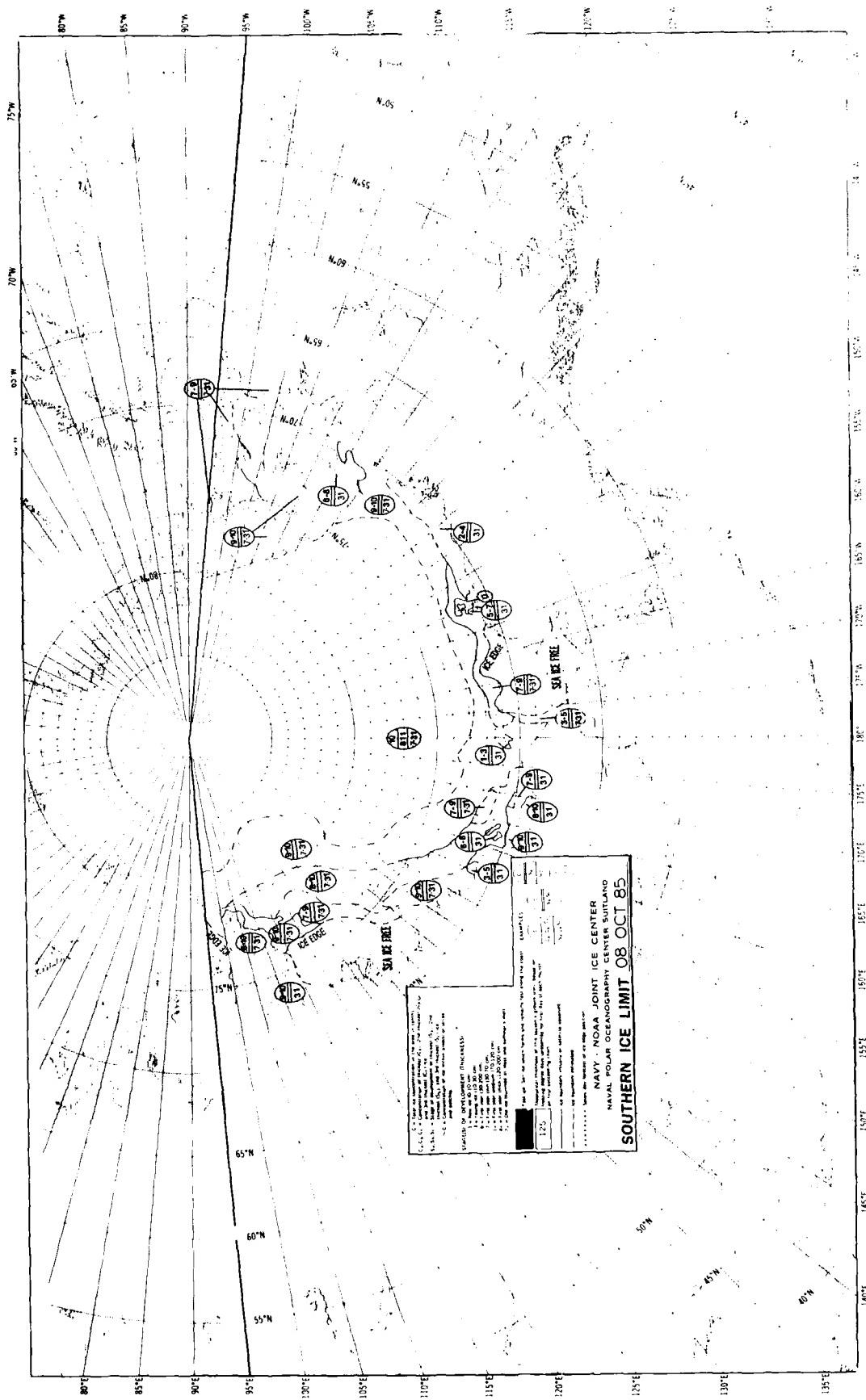
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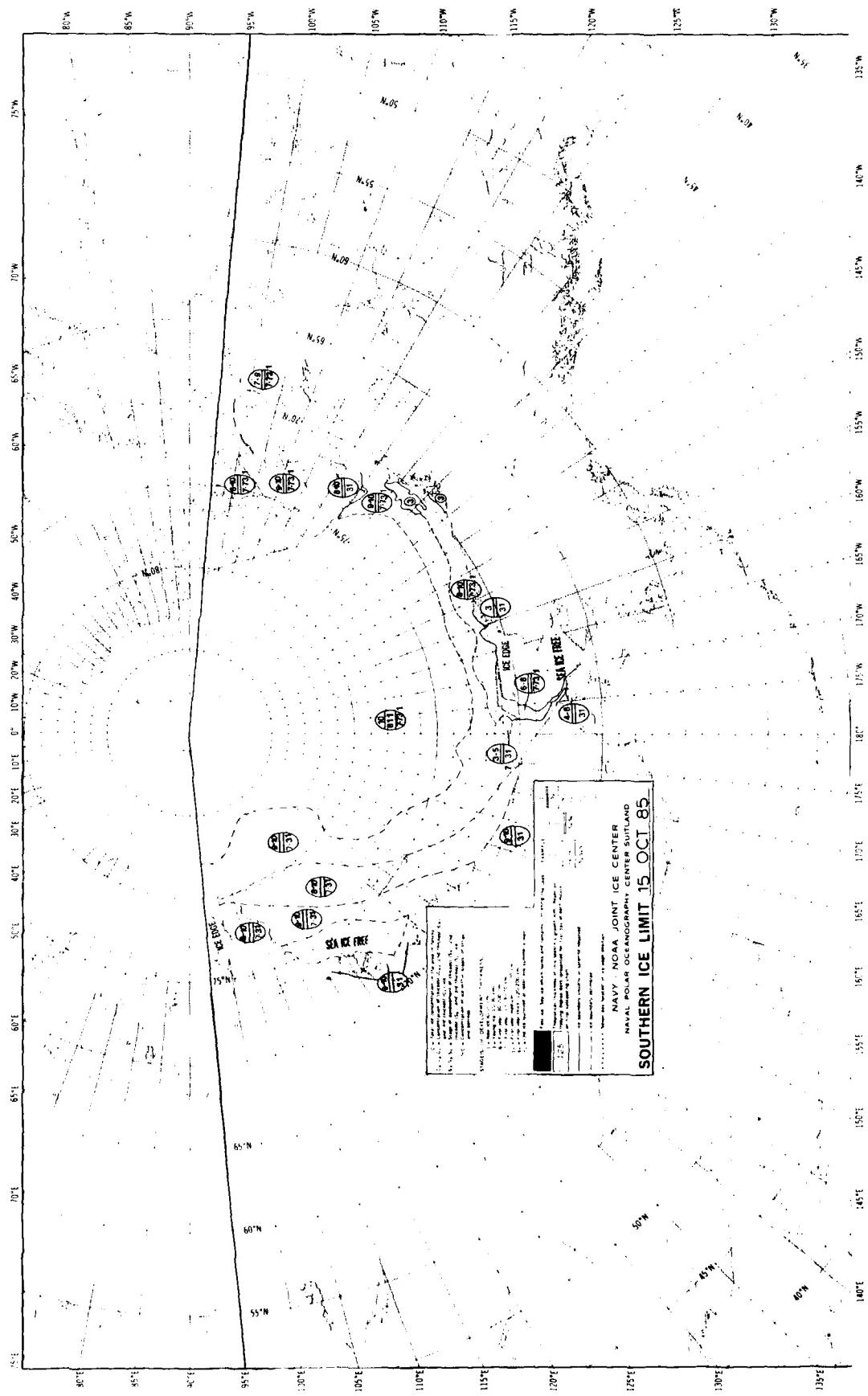
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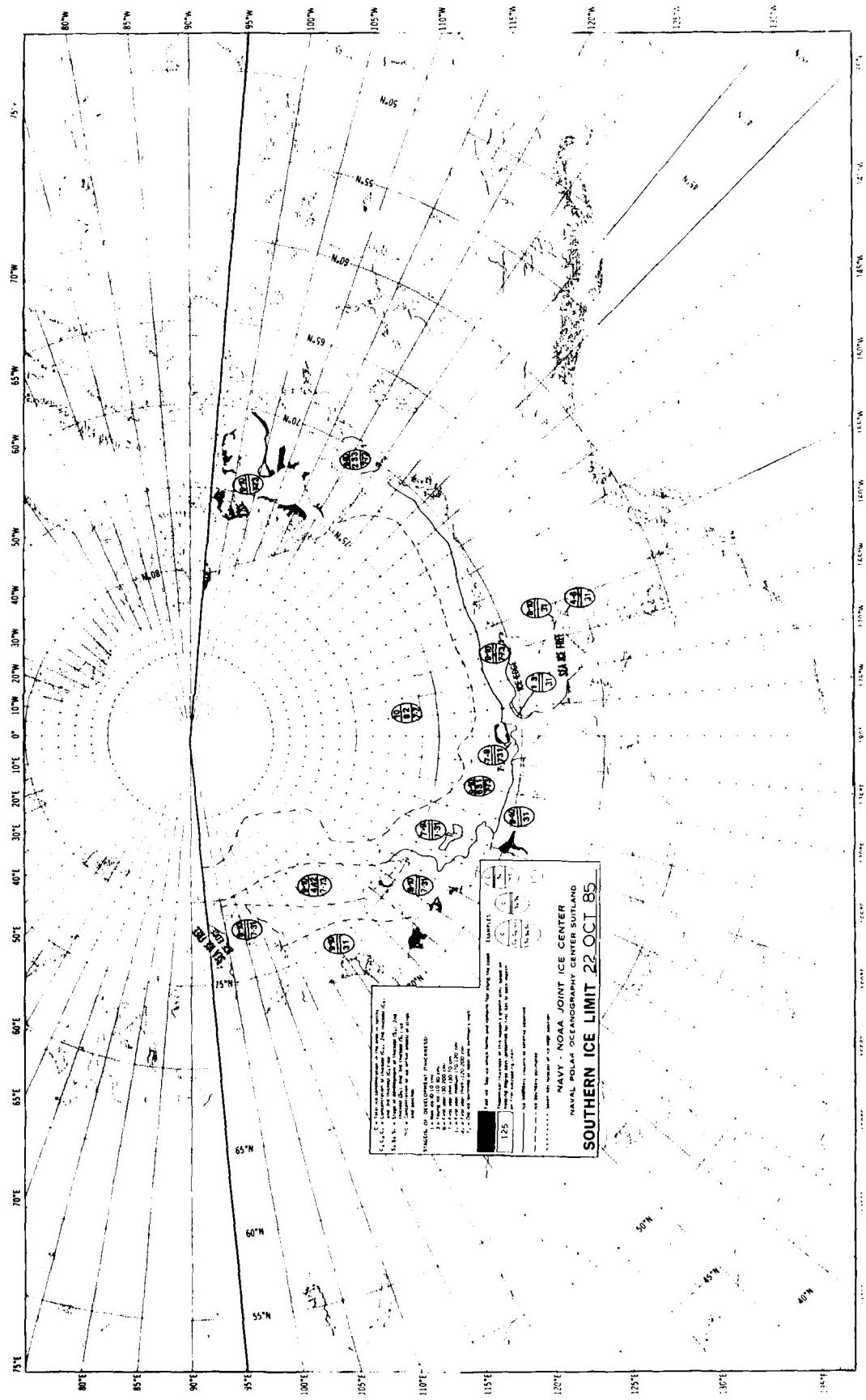


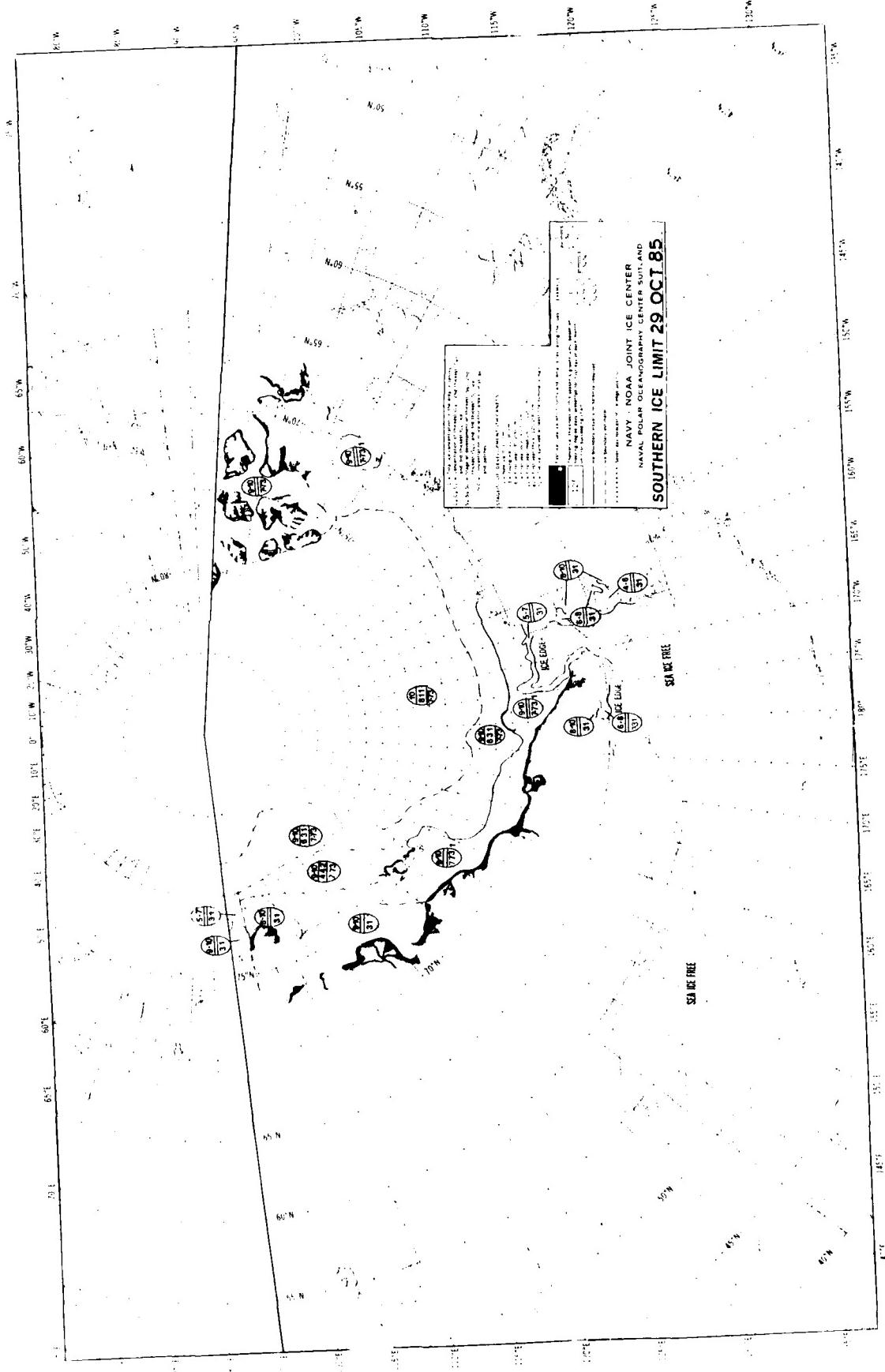
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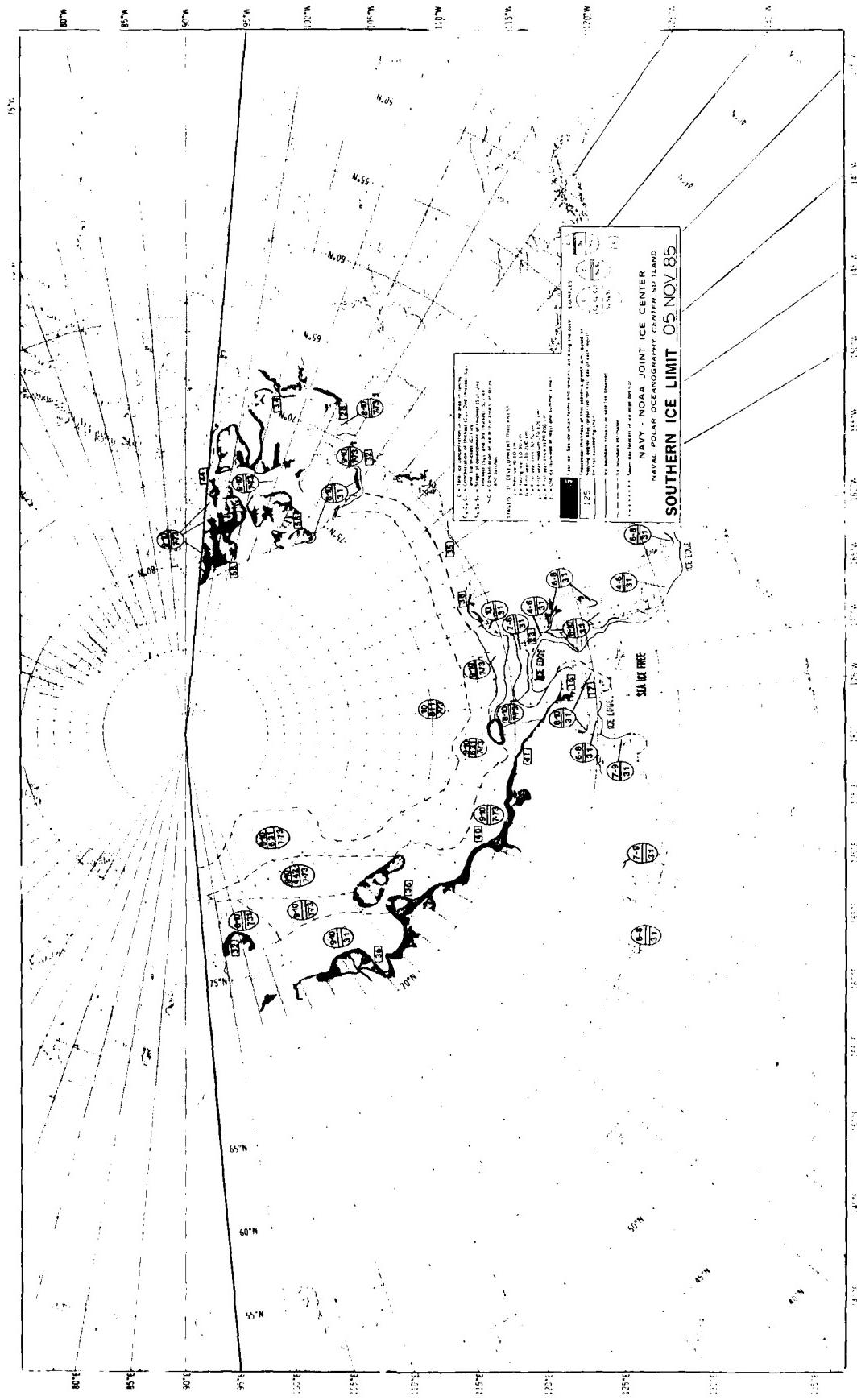


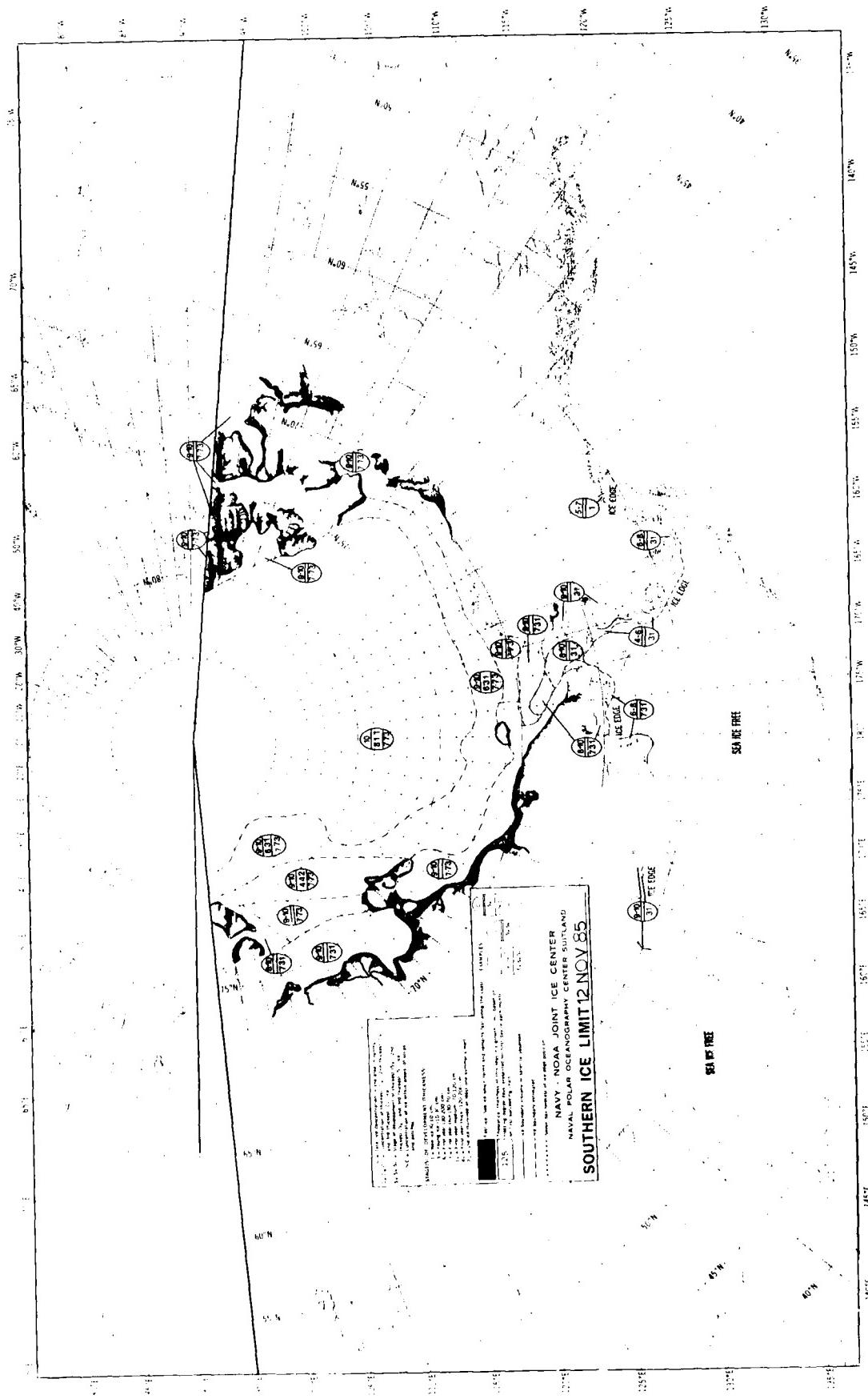


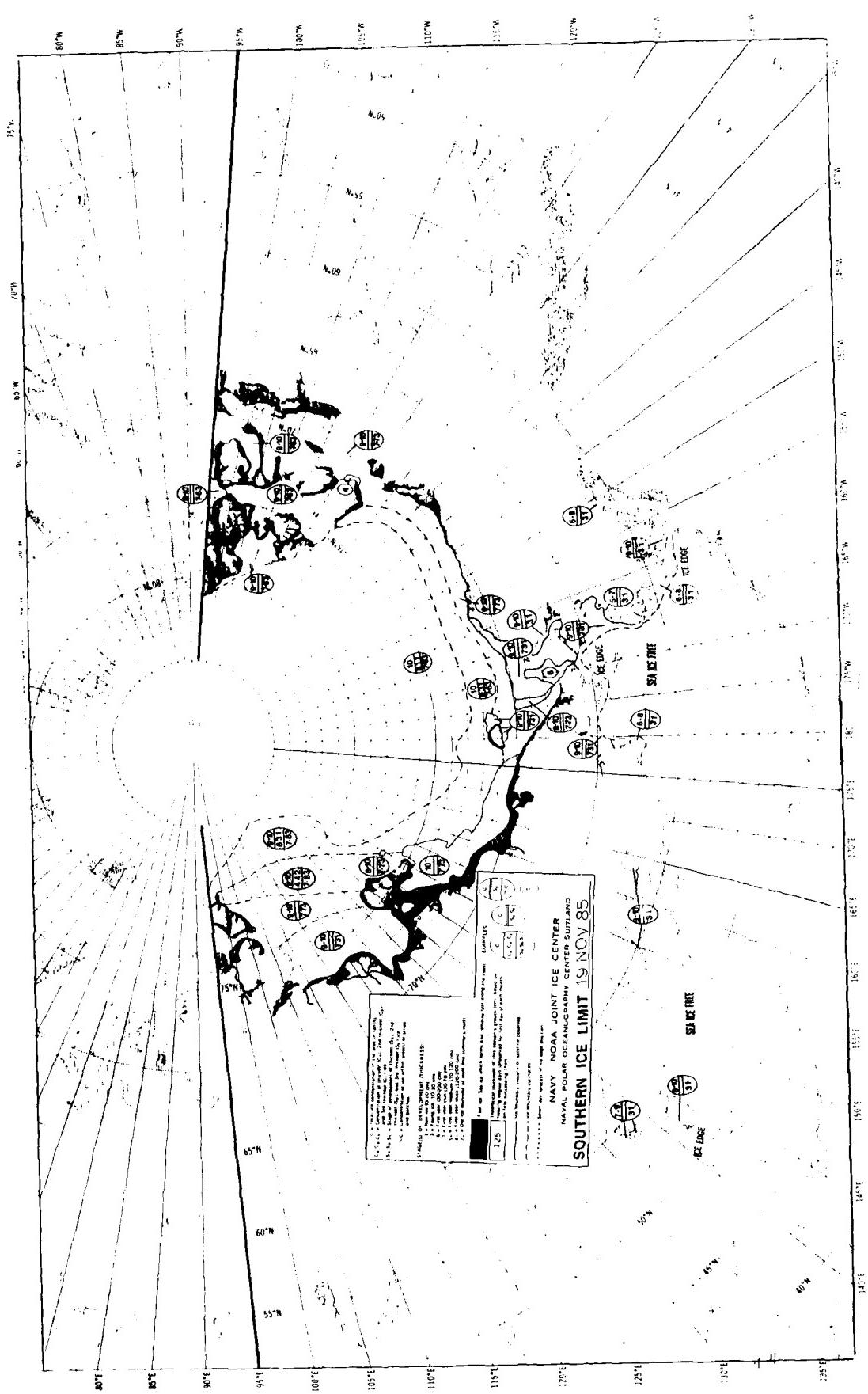


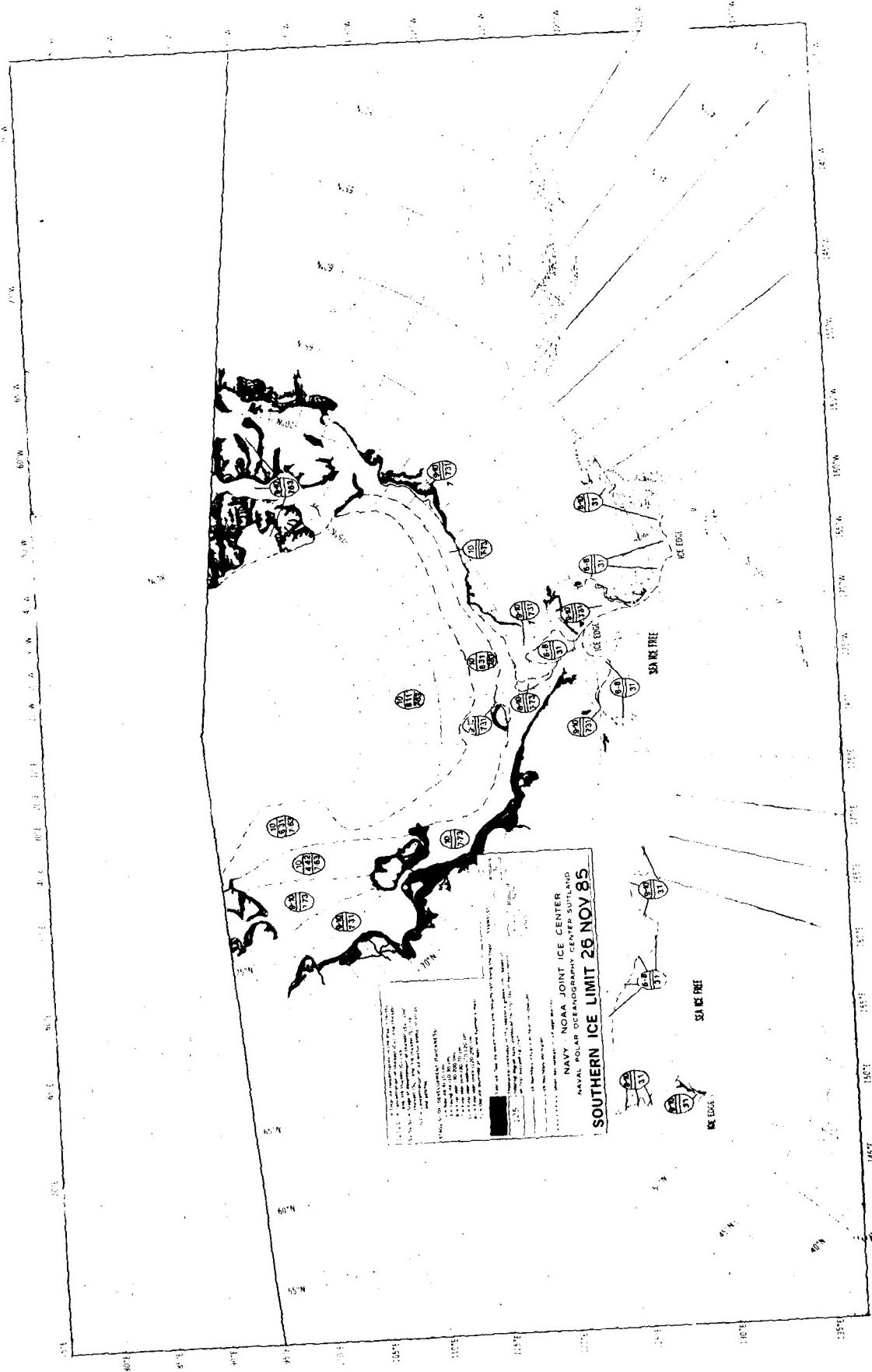


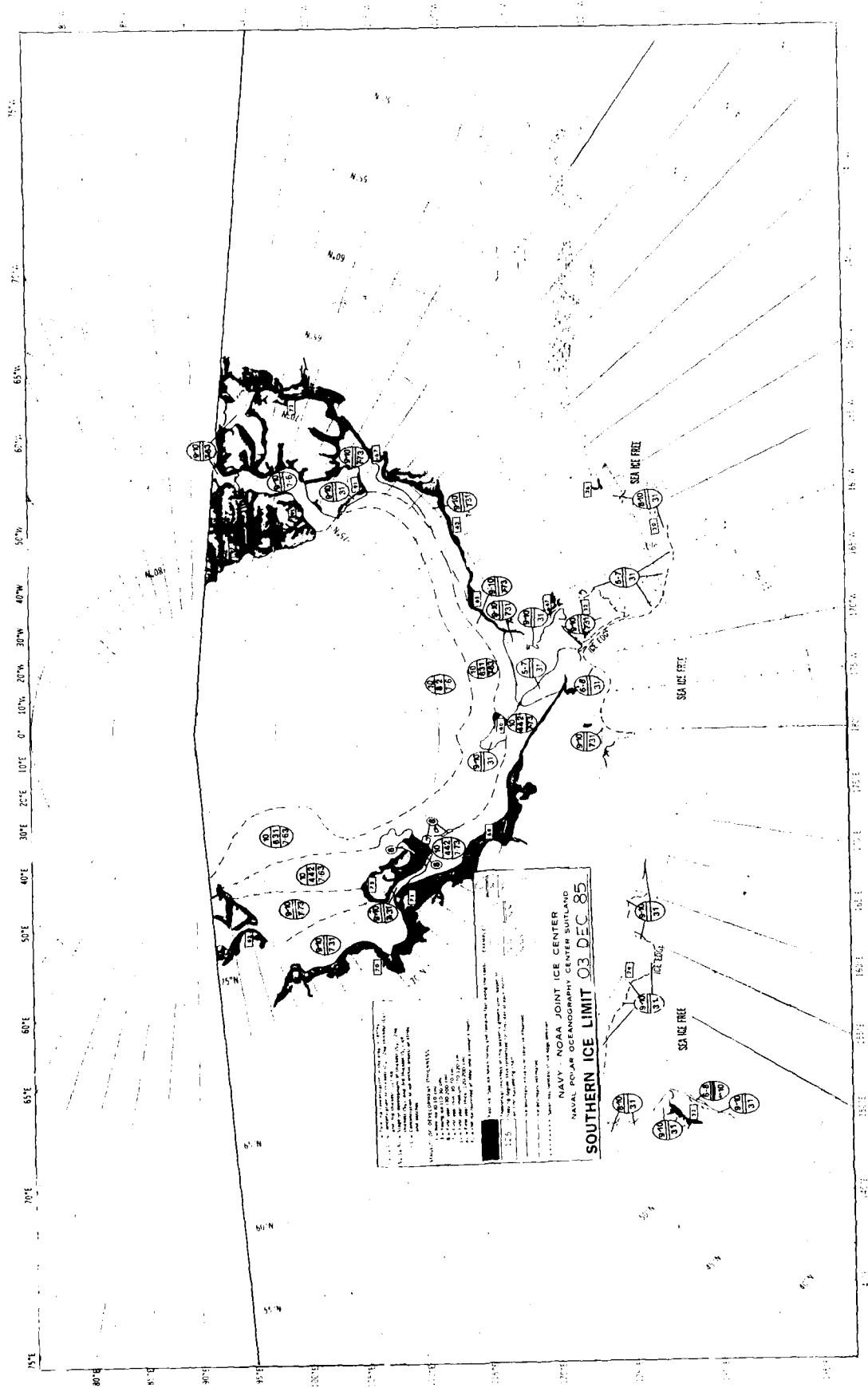


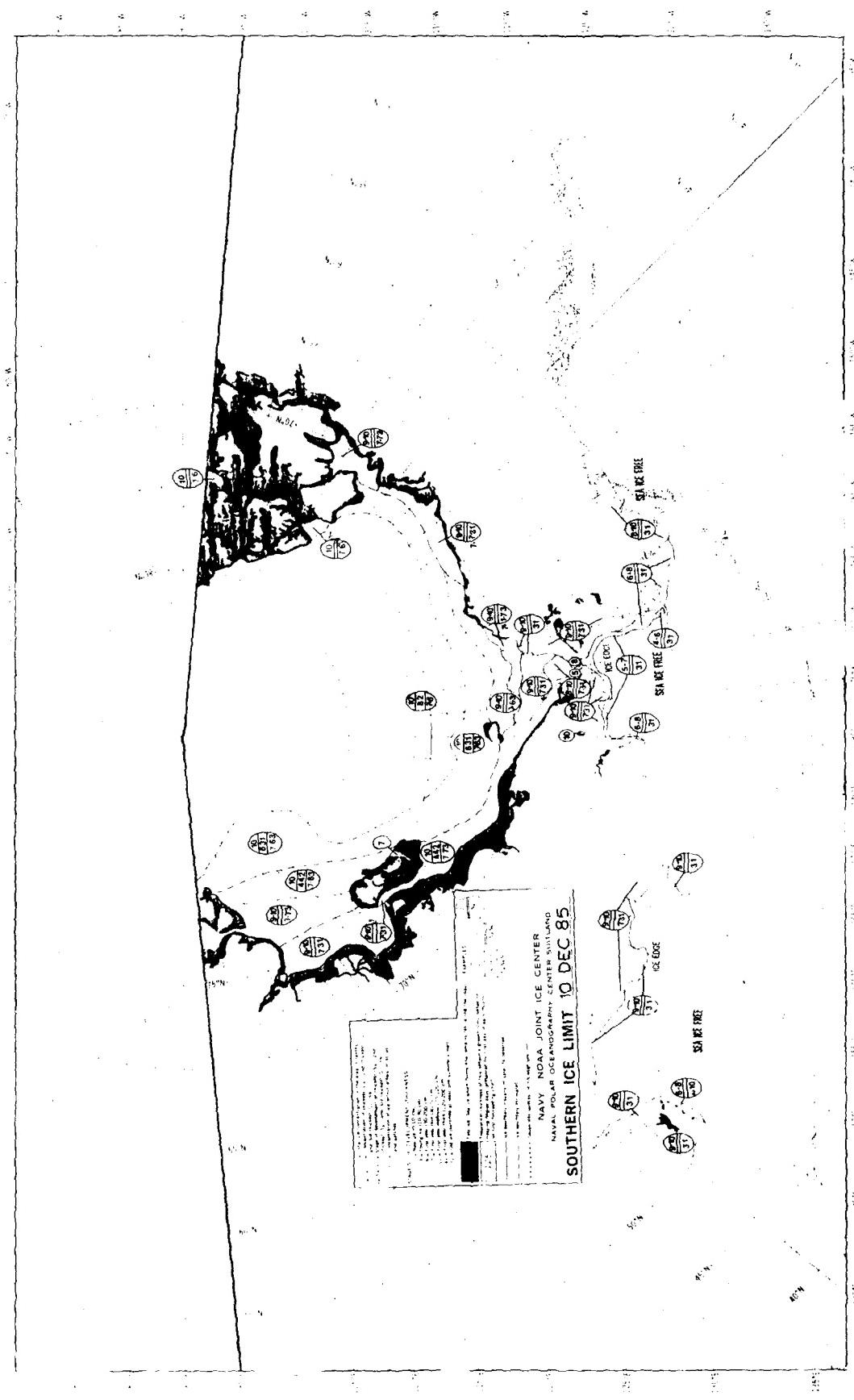


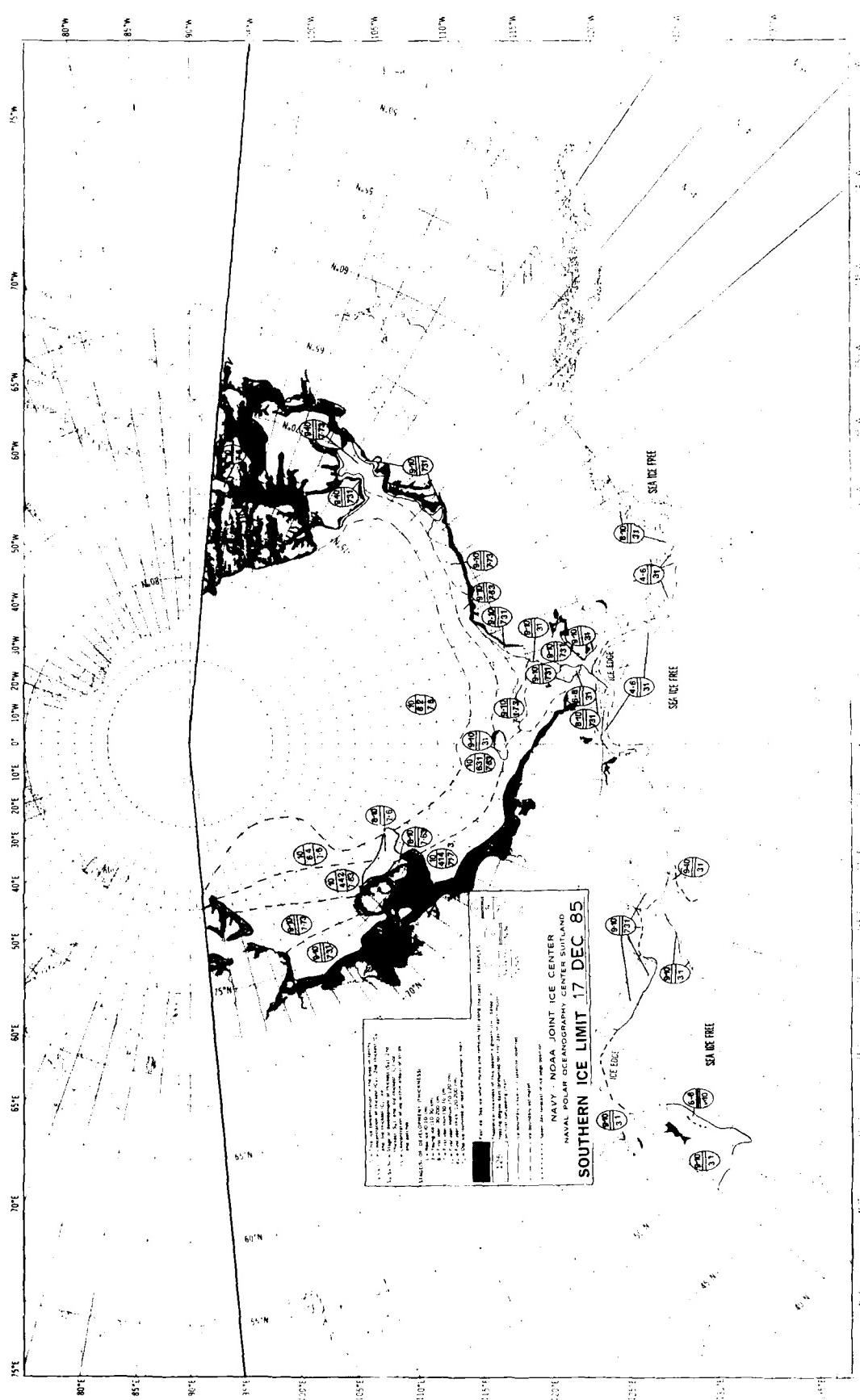


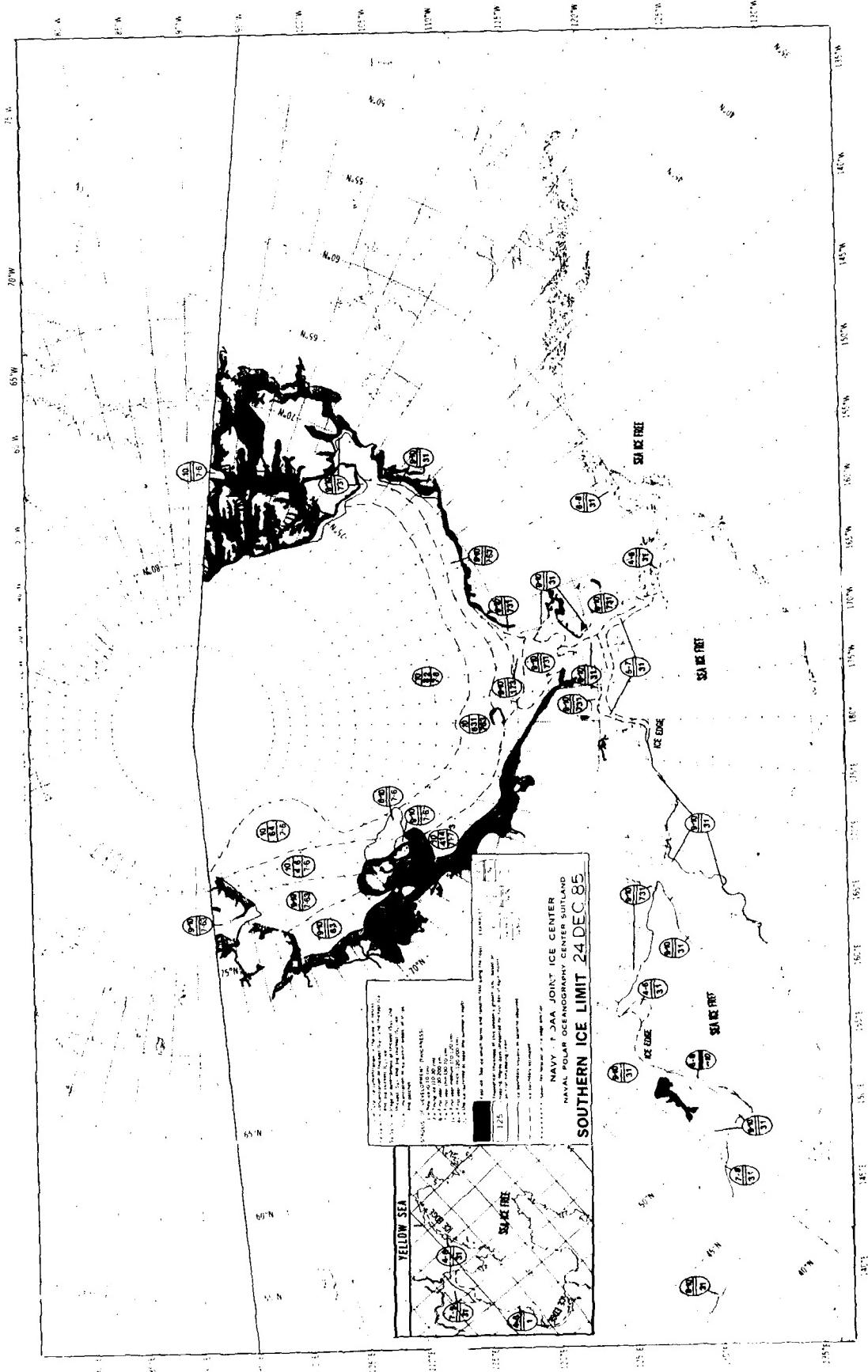












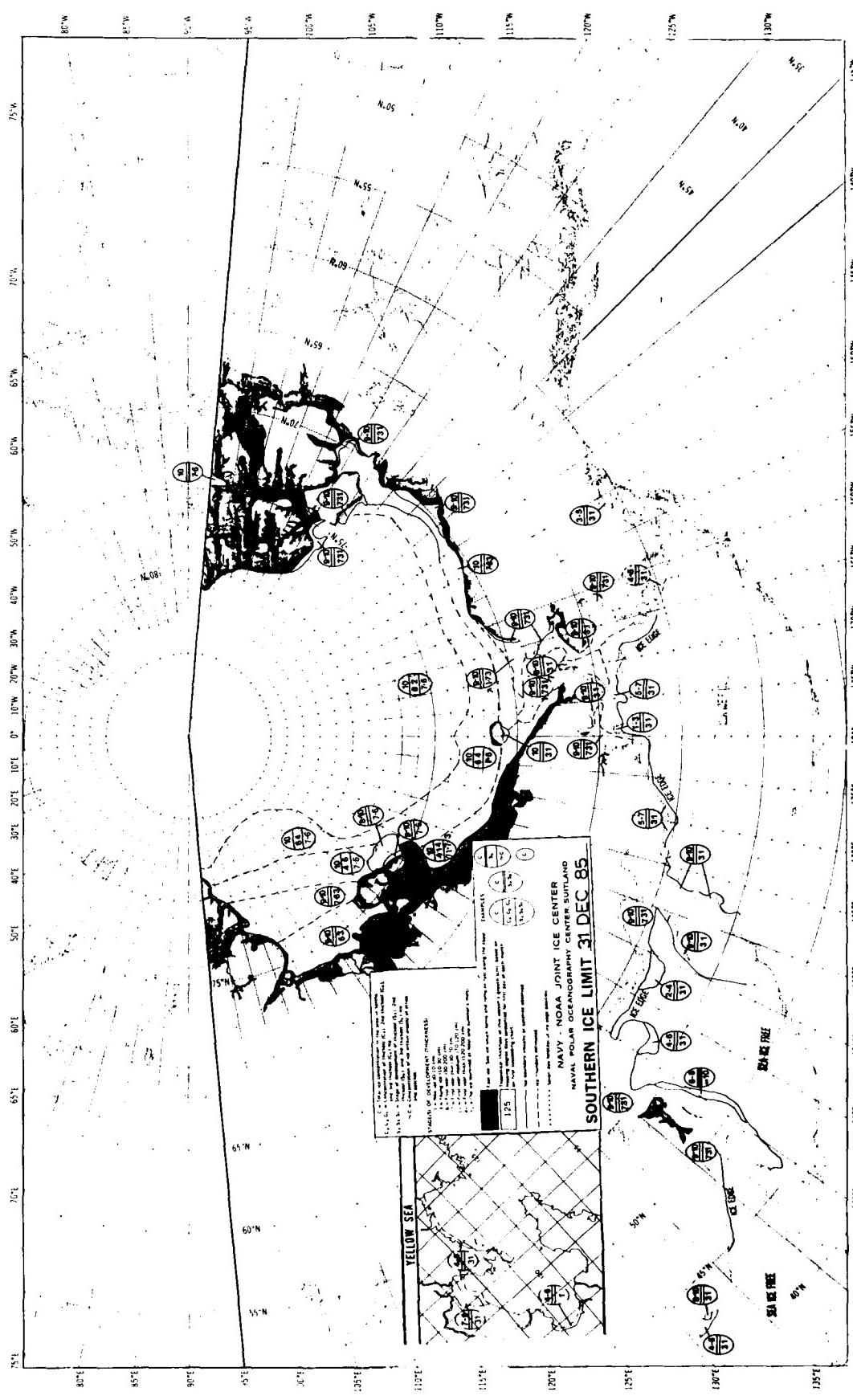


TABLE I SATELLITE DATA UTILIZED DURING 1985

Time Period		Satellite Remote Sensing			Resolution	Coverage
From	To	Sensor Platform	Sensor Type	Spectral Region		
1-85	1-85	NOAA-6	AVHRR HRPT/LAC VIS NIR IR	0.58-0.68 um 0.73-1.10 um 10.5-11.5 um	1 km	Regional
2-85	6-85					
2-85	12-85	NOAA-7	AVHRR HRPT/LAC VIS NIR IR	0.58-0.68 um 0.73-1.10 um 10.5-11.3 um	4 km	Global
	1-85					
7-85	10-85	NOAA-8	AVHRR HRPT/LAC VIS NIR IR	0.58-0.68 um 0.73-1.10 um 10.5-11.5 um	1 km	Regional
	1-85					
1-85	12-85	NOAA-9	AVHRR HRPT/LAC VIS NIR IR	0.58-0.68 um 0.73-1.10 um 10.5-11.5 um	4 km	Global
	1-85					
2-85	12-85	NIMBUS-7	SMMR	0.81 cm 1.66 cm	50 km	Global
	1-85					
2-85	12-85	DMSP-F(6)	VIS IR	0.4-1.1 um 10.2-12.6 um	3.7 km 4.4 km	Global
	1-85					
2-85	12-85	DMSP-F(7)	VIS IR	0.4-1.1 um 10.2-12.6 um	3.7 km 4.4 km	Global
	1-85					

Abbreviations and Acronyms

AVHRR - Advanced Very High Resolution Radiometer

HRPT - High Resolution Picture Transmission

SMMR - Special Sensor Microwave Radiometer

DMSP - Defense Meteorological Satellite Program

VIS - Visible Spectrum

IR - Infrared Spectrum

UM - Micrometer

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